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CONTENT

EDITORIAL

RESEARCH PAPERS

REVIEW PAPERS

BOOK REVIEWS

THANKING OUR REVIEWERS

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Academic Integrity: Author-Related and Journal-Related Issues

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ABSTRACT

Introduction: Author-related and journal-related metrics have long been the target for manipulations on part of some researchers, journals, and occasionally countries, eager to rank higher or get other benefits. Games played with metrics are abundant and may be triggered by rigid "publish-or-perish" national or university policies and consequent pursuit for benefits. In addition, new technologies make headway to unprecedented schemes in research production and promotion. The JLE Editors aim to inform JLE readers of their stance on the current revision of the JLE ethical guidelines for authors, editors, and reviewers in response to the new challenges.

Basic Concepts Related to Academic Integrity: The key concepts related to academic integrity are commented on, including some particulars about academic integrity, plagiarism, academic misconduct, fabrication and falsification of data, peer review manipulations, citation manipulations, and predatory journals.

Revisions in the JLE Editorial Policy on Authorship: With the ChatGPT entering the realm of science, the technology caused a heated debate over the ethical aspects of Artificial Intellect (AI) generated submissions to scholarly journals. The JLE editors share a rather popular stance that submissions cannot be subject to ChatGPT generation or revision.

Conclusion: The JLE has been revising its ethical guidelines as of authorship, including the limits for ChatGPT uses in submissions. The JLE editors apprise all stakeholders of the revised guidelines that cover the use of generative pre-trained transformers in submission generation.

KEYWORDS

academic integrity, academic misconduct, fabrication, falsification, peer review manipulation, citation cartel, self-citation, citation stacking, predatory journals

INTRODUCTION

Many metrics like journal impact factors in the Web of Science, Cite-Score and H-index in the Scopus database, author's citations, and personal H-index quite often tend to be gamed in the contexts of some authors, institutions, and even countries. It appears to be reasonable as such metrics at large are widely supposed "the dominant currency of intellectual recognition in academia" (Teixeira da Silva, 2021). The situation was aggravated when the new dimensions of science had been introduced by the early 2000s in the countries that are defined as the "core" of science. Being the core, those countries, including the USA, EU, and others, set dominant culturally based discursive paradigms in world science (Larson, 2013). De-bordering of research throughout the world from the late 2000s on resulted in implicating researchers and universities from the so-called semi-periphery and periphery of science (Larson, 2013) in these new games for excellence in science and technologies. Thus, research integrity has spread to become a truly international issue. At present, misconducts relating to research are a mixture of unethical practices, following both international and national patterns. A spurt in research misconducts can be attributed to deeper and wider internalisation of science via relevant policies.

Country-related issues of research misconduct appear when a rigid research policy is pursued, based essentially on metrics. "One can reasonably argue that publications in WoS/ Scopus largely pre-

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determine university prosperity" (Lambovska, & Todorova, 2023). Aimed entirely at the quantity of publications in international journals, the affected countries are often found themselves with an avalanche of national publications in predatory or other low-quality journals, though temporarily indexed in Scopus and other major international journal databases. Their research is mainly imitating the top high-quality publications from the US and Europe[1]. But countries may be switching from pursuing quantity to quality of research. One of the often-cited examples of such a switch is China, with changing its position as a second large contributor to research in the world to become the front runner in 2019 with "a greater percentage of the most influential papers"[2] in contrast to numerous publications of much lower quality before 2019.

Internalisation of research spurred by internalisation of higher education worldwide in addition to the "publish-or-perish" academic culture of the 21st century brought into being sophisticated unethical behaviours and schemes.

In our editorial review, we aim to address the most essential misconduct practices, including the emerging ethical challenges related to artificial intelligence participation in research, writing a scholarly publication, peer review, and editing in journals, with a view to revising the JLE ethical guidelines for all stakeholders.

BASIC CONCEPTS RELATED TO ACADEMIC INTEGRITY

Academic Integrity

Academic integrity is the commitments to ethical principles in academic activities. It is also defined as "the values, behaviour and conduct of academics in all aspects of their practice" (Macfarlane et al., 2014). It is closely connected with many other concepts, often negative in their meaning. Academic integrity is often explained via its antonyms or negative concepts, including academic misconduct, unethical behaviour, academic dishonesty, and even plagiarism, and data manipulation. Some authors note that the most cited publications on academic integrity have "three times more likely "academic dishonesty" included in their titles than "academic integrity" (Lancaster, 2021).

Research on academic integrity began as early as the 1900s. A new wave of interest in academic integrity came in the early 2000s and later when open access models of scholarly publishing led to the emerging black market of predatory journals and massive cases of academic misconduct. So far, most publications on academic integrity have been interdisciplinary, covering various aspects of academic ethics, science and research, scholarly communication, law, education, social patterns of behaviour, psychology, etc.

Plagiarism

The analysis of the definitions made by M.F. Abad-Garcia (2019) shows that most definitions share a general idea of plagiarism as unethical or unattributed borrowing of ideas or text and presenting them as "new and original" (Abad-Garcia, 2019). The Committee on Publication Ethics (COPE) defines plagiarism as "unreferenced use of others' published and unpublished ideas"[3].

Academic Misconduct

Academic misconduct is considered within the scope of unethical behaviour in the academia and linked to various unethical practices. In this publication, we are focusing only on academic misconduct related to research. In their Guidelines on Good Publication Practice, the Committee on Publication Ethics (COPE) dwells upon the features of good research. They should be "well planned, appropriately designed, and ethically approved"[4]. Lower standards of research may imply an academic misconduct. Some researchers explain academic misconduct via its associations with the dark triad (psychopathy, narcissism, and Machiavellianism) and antisocial behaviour of a person (Ternes et al., 2019).

The more pressures researchers face, the more frequent cases involving academic misconduct are. With a rise in numbers of PhD students worldwide, academic and research misconduct occur more often. PhD students may have unclear or distorted perceptions of ethics and research process and may choose practices that are unacceptable in the academia. PhD students are often influenced by "culturally specific issues" and "problems of knowledge and understanding transfer" (Mitchell, & Carroll, 2008). In addition, journals often tend towards discriminatory policy in relation to young researchers, thus, "forcing them to use inappropriate authorship models" (Gureyev, & Mazov, 2022).

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1. Schalit, N. (2023). China now publishes more high-quality science than any other nation – should the US be worried? The Conversation, Jan 10, 2023. https://theconversation.com/china-now-publishes-more-high-quality-science-than-any-other-nation-should-the-us-be-worried-192080
2. Ibid.
3. Committee on Publication Ethics (COPE). Guidelines on good publication practice. URL: https://farname-inc.com/post-2/f53d32c/Committee-on-Publication-Ethics-COPE-GUIDELINES-ON-GOOD-PUBLICATION-PRACTICE (accessed November 15, 2023).
4. Ibid.

To understand the ways research misconduct related to journal publications occur, it may be reasonable to analyse the grounds for retractions in journals. To some extent, retractions prove increased responsibility of a journal. In fact, they are the cases based on found errors or academic misconduct in various forms. But simultaneously, retractions establish the cases of misconduct as the analysis of the retraction grounds proves. The *Bone & Joint Research* Journal ascertained the major reasons for retractions from 1995 to 2015. They included "fraudulent data, plagiarism, duplicate publication, and data errors" (Yan et al., 2016, P.265). Other researchers outlined more reasons, including also author-related (i.e. false authorship or attributed authorship, guest and gift authorship, author disputes, manipulations with adding or excluding authors stated in the byline), data-related (both falsification and fabrication of data), results-related and investigation-related (erroneous methods or interpretation of results), review-related (fake or superficial peer review), and ethical grounds (AlRyalat et al., 2020). But plagiarism and duplicated publications are stated as the most frequent reason almost in every research on retractions in journals. Retractions may occasionally take many months or even years to be made. At present, the average period from publication to retraction is about 24 months in the study by AlRyalat et al. (AlRyalat et al., 2020) that is consistent with other studies (Moylan, & Kowalczuk, 2016). The longer periods may also be caused by analysing journals' deeper archives.

When the focus is placed on research, academic misconduct may be particularized as "research misconduct". Both terms are rather close in meaning, with "academic misconduct" perceived as an umbrella term.

Fabrication of Data and Falsification of Data

Fabrication of Data and Falsification of Data have one basic trait in common. They are made for the purpose of deception. Any intentional alteration of research data, materials, results, or other essential components of research produced to meet an exact objective, or a particular result are defined as a falsification of data. If research data are made up or created by a researcher, and they never exist, they are treated as fabrication of data.

Peer Review Manipulations

Peer review is the core of scholarly publishing. It serves as a mechanism of public and academic control over the quality of submissions to scholarly journals. Mitigating manipulation in peer review may be reached via avoiding practices when an author suggests reviewers, randomized choice of reviewers, introducing open peer review, "unfettered access of the public and scientists to a published work for critical analysis" after publication (Teixeira da Silva, 2013), etc.

Citation Manipulations

Science publishing is "a very biased process by virtue of the biased nature of humans" (Teixeira da Silva, 2017). Any stakeholder may be inclined to a bias. "Publish or Perish" academic culture of the 21st century forces researchers not only into promoting their publications to established and top quartile journals, but also into getting citations for their articles. Citations validate any research, enhance its credibility and visibility, and promote both an article and its author.

Researchers are cited unevenly. There are numerous factors resulting in more citations. First, the Mathew effect of accumulated advantage applied to economic and social success may be transferred to citations. Greater social capital of a researcher in translated into more citations as compared with another researcher without numerous connections (Perc, 2014). Second, citation-worthy articles have more or less similar features, including the topic prominence of an article with an eye-catching title, article originality, rigorous methodology, a clear and sophisticated design, relevant, comprehensive and up-to-date literature. But citations are not only about the quality of publications. They may be induced by an unusual set of circumstances or even framed up on an author's part. The latter embraces various manipulations with citations. Citation manipulations, including negotiated and honorary citations, are part of schemes of unethical behaviour caused by citation chasing or stacking.

Citation stacking entails practices in which authors or journal editors are teamed up to increase the citation of their articles by disproportionately citing articles of cartel members more than other relevant articles[5]. Citations cartel implies "a group of authors that cite each other disproportionately more than they do other groups of authors that work on the same subject" (Fister et al., 2016).

Analyses of accounts of authors in international databases as well as citation networks give an idea of relationships among groups of authors. They may help in detecting citation manipulations. Citations are not the only target of manipulations. Other metrics like H-index of an author, as well as of a journal, or a research institution together with journal impact factor are also often gamed with.

Predatory Journals

In the early 2000-s, a new type of journals came into being, taking advantage of open access schemes. They became soon ubiquitous. They launched aggressive marketing in response to "publish or perish" trend in the academia. Jour-

[5] Enago Academy. Citation Cartels: The Mafia of Scientific Publishing, Dec 26, 2022. https://www.enago.com/academy/citation-cartels-the-mafia-of-scientific-publishing/

nals masquerading as peer reviewed and falsely advanced to be indexed in Scopus and other esteemed databases. Consequently, they make breath-taking profits by selling researchers an unethical possibility to get their papers published avoiding real peer review and other publicly important filters for research. They became omnivorous, publishing anything irrespective of quality and scientific value (Abad-García, 2019). Such journals do not tend to uphold the scholarly ethics standards. Predatory journals are defined as "entities that prioritize their interests over scholarly values" (Marar et al., 2023). They are "fraudulent publications characterized by aggressive marketing solicitations and deviation from best publishing practices" (Leducq et al., 2023). They "report false or deceptive information, depart from established editorial and publication norms, lack transparency" (Marar et al., 2023). Unfortunately, open access with all its great contribution to Open Science pays dearly for its openness.

Ethical standards have been constantly revised to combat dubious practices of new participants on the growing market of scientific publications. In 2015, the number of predatory journals hit 11,800, whereas it exceeded 15,000 journals in 2021[6], nearly equalling the number of decent scientific journals. The number of publishers involved in predatory publishing worldwide amounted to 1,000[7]. As a result, public trust in science has been seriously undermined.

Revisions in the JLE Editorial Policy on Authorship

Ethical perceptions of authorship are going through a deep and comprehensive rethinking, with ChatGPT and AI-generated text technologies spreading fast. The texts they produce may be of any genre and conform to numerous parameters. As ChatGPT is based on large language models, a text it generates may comply with any assigned criteria both by content or genre and style.

Though ChatGPT output is not guaranteed against errors that the original data may contain, or errors occurred due to misunderstanding of users' queries on part of AI. The latter is caused by users' inaccurate or vague queries or by AI's failures to analyse implications and overtones in users' queries.

However, ChatGPT 4.0 by Open AI has been showing great results in "passing" medical examinations with flying colours and in diagnosing complex cases in medicine (Ho, Koussayer, & Sujka, 2023). The technology proves that it may be successful in many other assignments. In early 2023, several articles were published, with ChatGPT as a co-author of research. These occurrences triggered a serious debate over ethical aspects of ChatGPT authorship and limitations to the technology appliance in tests and examinations (Tollefson, 2023; Tang, 2023; Illia, Colleoni, & Zyglidopoulos, 2023; Okaibedi, 2023).

In our previous editorial (Tikhonova, & Raitskaya, 2023), we elaborated the pros and cons of the debate over ChatGPT use limitations. Its major result so far is defining authorship through authors' responsibility for the generated text or any other copyrighted object. AI cannot be held responsible for generated texts as an author. On the same ground, AI cannot be considered an author.

Next, no less important is the issue of AI appliances at other stages of research. AI-based assistants like Grammarly, Hemingway Editor, Jasper AI, etc. essentially improve texts of research submissions, but they do not generate text the way ChatGPT does. Thus, all the focus of our doubts is placed on text-generated AI technologies.

The JLE editorial board and team stick to the point that ChatGPT can be used mainly within some specific parts of research limited to information extraction or other similar stages of research. Submissions cannot be subject to ChatGPT generation or revision.

On its part, JLE shall not apply ChatGPT or similar large language models in editing or peer review as we treat all submissions to our journal as strictly confidential objects of copyright law.

CONCLUSION

Academic integrity and rigid ethical practices remain the backbone of production and dissemination of research. Practices of academic misconduct require a comprehensive and immediate responses, including desk rejections of submissions if any misconduct is detected, rigid editorial policies towards identified falsifications and fabrications of data, retractions of all publications if academic misconduct is found, hard-line attitude towards cases of plagiarism and AI-generated content in submissions.

JLE is constantly following the worldwide debate on the limitations and ethical considerations relating to ChatGPT and similar technologies to update its editorial policy and ethical standards. With new ChatGPT detection technologies or changing attitudes in the academia, we do not hesitate to introduce further changes in the JLE stance.

6 Freedman, E., & Kurambayev, B. (2023). Rising number of "predatory" academic journals undermines research and public trust in scholarship. Phil's Stock World. Sept. 19, 2023. https://www.philstockworld.com/2023/09/19/rising-number-of-predatory-academic-journals-undermines-research-and-public-trust-in-scholarship/

7 Ibid.

Thus, the JLE adds the following to the guidelines for authors, editors, and reviewers:

JLE Guidelines on the use of AI in submissions and other copyrighted objects

Authors shall follow the best academic practices that imply an author's responsibility for his or her submission as a whole. No part of the submission can be authored by any AI technologies, including ChatGPT or any other similar large language models. When applying to the JLE, every author is to state that the submitted text and other copyrighted objects included into a submission are not subject to AI production. At the same time, authors are free to use AI-based apps, including Grammarly, DeepL, Hemingway Editor, etc.

At any stage of the publishing process, JLE Editors shall never expose submissions to the JLE to generative pre-trained transformers as the scholarly information contained in submissions may go public, thus infringing their authors' rights.

As any submission is treated as a confidential document, Peer Reviewers have no right to process the submitted manuscripts with ChatGPT. Reviewers' reports are not subject to AI-based text generation.

AUTHORS' CONTRIBUTION

Lilia Raitskaya: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Software, Validation, Visualization, Writing – original draft, Writing – review & editing, other contribution.

Elena Tikhonova: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Software, Validation, Visualization, Writing – original draft, Writing – review & editing, other contribution.

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The Development of a Reflective Language Learning Model: A Structural Equation Modeling Approach

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ABSTRACT

Background: Several language learning theories exist to explain the language learning process. Reflective learning is one of the models that has received attention and has been employed to explain language learning and teaching.

Purpose: The present study aimed to develop and validate a close-ended reflective language learning instrument to discover EFL learners' reflective learning strategies while learning a language.

Method: Based on a comprehensive literature review, 358 concepts were extracted for reflective language learning. Then, experts' opinions on reflective language learning were gathered, leading to the extraction of 50 general themes. After the experts' approval, the researchers transformed the concepts into statements and constructed the final version of the questionnaire. In the next step, the initial version of the questionnaire was piloted with 100 participants, reducing the number of items to 47. Then, the piloted instrument was administered to a sample of 398 students. The obtained data were entered into SPSS and LISERL for exploratory and confirmatory factor analyses. Principle Component Analysis (PCA) was employed to run an explanatory factor analysis. Varimax rotation was performed on the underlying construct of the 47-item questionnaire. The result was the removal of four items and forming a 43-item questionnaire. A six-factor model of second language learning encompassing twelve behavioral cognitive items, twelve behavioral evaluative items, six behavioral metacognitive items, six behavioral interactional items, four behavioral reflective journal items, and three behavioral retrospective items was obtained. Then, the researchers performed confirmatory factor analysis to verify the six factors. Finally, a reflective language learning model was developed.

Results: The results showed that the newly developed Reflective Language Learning Questionnaire (RLLQ) was valid and reliable. The model formulated based on the data gathered from the administration of RLLQ also enjoyed acceptable fitness indices.

Conclusion: The questionnaire could be used in future studies. Researchers interested in reflective language learning, language teachers intending to follow reflective practices in their classes, and syllabus designers believing that reflection promotes learning can employ RLLQ.

KEYWORDS

construct validation, language learning, model development, reflection, Reflective Language Learning Questionnaire (RLLQ)

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INTRODUCTION

Throughout the history of English language teaching, controversies regarding learning a new language have been conspicuous among pedagogy practitioners and researchers. Such disputes have been due to perspective changes in defining language, learning, and teaching. Thus, researchers' quest to develop successful language learning models has been a central issue. One such model is reflective learning, which has been explored by several researchers (Gadsby, 2022; Kolb, 1984, 1994; Schön, 1987) since Dewey published his inspiring viewpoints regarding reflective thought in 1933. The effect of reflection in language teaching and learning is undeniable since reflection occurs in everyday activities in the human mind. Reflective learning is synonymous with lifelong learning (Tan, 2021); thus, it can be employed in different learning contexts (Griggs et al., 2018).

Reflective learning has its roots in reflective thinking, which is crucial in fostering individuals' intellectual processes to become efficient in problem-solving and decision-making. Reflective thought embraces “active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends” (Dewey, 1933, p. 6). According to Dewey, reflective learning consists of two interrelated notions: first, a state of mental doubt in which thinking originates, and second, an act of inquiring to settle hesitation and perplexity, which could be resolved if explored through empirical studies. Schön (1983; 1987), who has a decisive role in expanding the notion of reflective learning, argues that learners' reflection on their own learning promotes learning. He distinguishes between reflection-in-action and reflection-on-action. Reflection-in-action is the activity that learners engage in as they encounter a problem in a learning context. Reflection-on-action is a process that occurs after learners' engagement in a learning context, and finally, in ‘reflection-for-action,’ individuals start planning materials. Therefore, the communal principle implied in reflective learning is that reflective thinking integrates “knowledge, practice, and human experience” (Colomer et al., 2013, p.1). What is essential is realizing that reflection is generally manifested in learners' actions when engaged in reflective practice (Alt et al., 2022).

Reflective learning explains reflection's role in teaching and learning and helps analyze the experience individuals have gained as a learning outcome. Kolb's (1984) experiential learning, developed based on Dewey's notions of reflection, indicates that individuals learn from their daily life experiences as they are engaged in reflection. Kolb and Kolb (2005) argue that personal experiences are the source of learners' autonomous learning and critical thinking.

However, using reflective practices is not limited to language learning and teaching. Several studies other than language teaching and learning have reported their efficacy (Cicmil & Gaggiotti, 2018; Rogers et al., 2019; Winkel et al., 2017). Moreover, studies on different aspects of reflective learning at university levels indicate that it significantly improves various aspects of learning (Aryani et al., 2017; Feng, 2016; Kember et al., 2000). Some studies have supported the role of reflective journals in improving reflective thinking (Bruno & Dell'Aversana, 2017; Griggs et al., 2018). Still, some others have shown the effect of reflective practice on language learning (Fuertes-Camacho et al., 2021; Southcott & Crawford, 2018).

However, the critical issue that motivated the current study researchers is understanding the effects of reflective activities on language learning and discovering the types of reflective learning strategies learners use while engaged in reflective practices. Therefore, the researchers aimed to construct a close-ended questionnaire to measure learners' learning strategies during reflective language-learning practices. The researchers assumed that developing a closed-ended reflective language learning scale can help EFL/ESL teachers understand the extent to which students get involved in reflective practices. Besides, they can specify strategies learners use during such procedures, resulting in cognitive processes responsible for learning. Such a scale can also help English language learners employ strategies to promote reflective learning. To achieve the study objectives, the researchers formulated the following research questions:

RQ1: What are the main components of Iranian EFL learners' language reflectivity?

RQ2: Is the newly developed reflective language learning questionnaire a reliable and valid data collection instrument?

LITERATURE REVIEW

Reflective Learning

Experiential learning, as the core concept of reflective learning, is a process by which learners reflect on their experience and obtain more understanding from such a reflection (Morris, 2020). Dewey asserts that when learners reflect, they confront emerging doubts, followed by a reflective process, and end in more understanding. For Schön (1983), reflection is the ability to think and decide how to act while doing a task (reflection in action). Thus, reflective learning usually deals with practical problems, accompanied by doubt and perplexity, before possible solutions (Fullana et al., 2016). Schön completes his view on reflection in action by a complementary stage of reflection or reflection on action, which refers to deep thinking about an experience and re-evaluating the decisions one made while performing an action. Hierarchical levels of reflection are observed in reflecting on action. Grossman (2008) believes in at least four levels of reflection along a continuum, ranging from descriptive accounts to varying levels of mental processing to transformative or intensive reflection. Other scholars suggest an increasing complexity such as reporting, responding, relating, reasoning, and reconstructing to define it (Marcos et al., 2009). However, most scholars agree that reflection is deliberate, purposeful, cognitive, and metacognitive thinking, which results in people improving their professional practice (Sellars, 2013; Yesilbursa, 2011). Kolb (1984) believes experiential learning is a sequential activity during which students achieve a broader understanding of the subject matter and become capable of generalizing new knowledge and putting it into further action. Thus, reflective learning is a deliberate process of cycles of inquiry in which learners move between action and reflection to understand a concept (Ramsey, 2006), resulting in a deep understanding of new concepts.

Reflective Learning Models

Several reflective learning models have been proposed based on Dewey's viewpoints on reflection. A model that has a vital role in understanding reflective learning is Kolb's (1984) four-stage experiential learning model, consisting of four stages: (a) *experience* (Concrete Experiences), meaning that all individuals have the opportunity to start the learning cycle in any situation or place, (b) *reflect* (Reflective Observation) which involves thinking about what a person has done and experienced, (c) *conceptualize* (Abstract Conceptualization) which is making a hypothesis about one's experiences, and (d) *plan* (Active Experimentation), that is, testing the hypothesis that a person has adopted. Kolb's learning model is cyclical, and the end of one cycle is related to initiating a new one. For Kolb, learning is a cognitive process, and individuals build knowledge based on their experiences with the environment rather than instruction. The challenges they encounter shape their learning process, and they pass the stages of action, reflection, feeling, and thinking. The advantage of Kolb's model over other models is that it considers learning styles and individual preferences in learning (Kolb & Kolb, 2009).

Other reflective models that have played a vital role in constructing associations between experience, learning, and reflection are Boud et al.'s triangular representation (1985), Gibbs' reflective cycle (1988), and Atkins and Murphy's (1993) cyclical model. Another example of a reflective model is Moon's (2004) five-stage reflective learning model. For Moon, *noticing*, *making meaning*, *making sense*, *working with meaning*, and *transformative learning* are significant in reflective learning. He asserts that without noticing, learning cannot happen; in making meaning, contextualization is vital, and making sense is equal to comprehension. Students gradually understand meaning and probably change their overall understanding by analysis.

However, some other models have developed reflective models with different dimensions. For instance, Black and Plowright (2010) constructed a multi-dimensional model of reflection consisting of "the source, target, and purpose of reflection" (p. 256). They argue that the reflective process could occur through written and internal dialogue with "self." Davys and Beddoe's (2009) reflective learning model of supervision rests on "the premise that supervision is a forum for learning and that the main vehicle for learning is reflection" (p. 920). Ideas and understanding are synthesized in the transformative learning stage, resulting in students' ability to evaluate the processes that lead to new knowledge. In a more recent model, Jasper (2013), inspired by Kolb, proposes three stages of experience, reflection, and action for reflective learning and argues that individuals' experiences (positive or negative) provoke reflection and lead them to take action.

Reviewing the models indicates that although they may portray different stages for reflective learning, all share three vital stages: experiencing a challenging situation, reflecting on the situation to solve a problem, and learning from the experience by evaluating it. All models suggest that reflection contributes to learning and boosts the impact of teaching on learning. Thus, examining students' reflection levels by developing a scale can illuminate the processes they follow in reflective learning.

Measuring Reflective Learning

To measure reflective learning, some researchers have employed journal writing in different fields, such as medicine (Pena-Silva et al., 2022; Rogers et al., 2019), engineering (Aryani et al., 2017), management (Gray, 2007; Loo & Thorpe, 2002), and teaching (Sabah & Rashtchi, 2016; Wallin & Adawi, 2018). Some others have focused on developing validated tools to contribute to understanding the "multi-dimensional nature" of reflective learning (Black & Plowright, 2010, p. 246). One such study was Kember et al.'s (2000), through which they developed a valid questionnaire using confirmatory factor analysis. Kember et al. extracted four factors for reflective learning: habitual action, understanding, reflection, and critical reflection, examining the extent to which students engage in reflective thinking in professional preparation courses. In another study, Peltier et al. (2005) developed a standard scale to measure four identified levels of reflection hierarchy (habitual action, understanding, reflection, and intensive reflection) of MBA program students. However, the authors suggested further studies using structural equation modeling to discover the relationships between several variables in reflective learning.

Colomer et al. (2013) also developed a Self-Reported Reflective Learning Questionnaire to examine students' views on teaching methods. The researchers were interested in finding the relationship between the participants' responses to the questionnaire and their experience, knowledge, self-reflection, and self-regulation. Besides, they intended to discover the students' difficulties in integrating reflective learning methodologies and learning processes.

Similarly, Min and Park (2019) intended to measure upper-secondary learners' reflective attitudes toward conversation. To this end, they constructed a 12-item questionnaire under the three constructs: thoughtful action, content and process reflection, and premise reflection. The study's results showed that the instrument measured participants' reflective attitude toward conversation; however, answering the questionnaire during or after conversation affected the level of reflective thinking.

Another way to explore the nature of reflective learning is by using open-ended questionnaires. For example, Bell et al. (2014) analyzed 150 participants' responses to four open-ended questions to examine whether they could change their viewpoints in favor of reflective thinking. Feng (2016) also developed an open-ended scale for measuring learners' intercultural competence, employing Kolb's four-stage learning cycle. The researcher provided a detailed description of the participants' answers to the open-ended questions (qualitative) and compared respondents' pre and post-performances on a survey.

However, none of the scales discussed so far was intended to explore different aspects of reflective learning techniques, such as cognitive, meta-cognitive, evaluative, and the like, to understand what occurs in the learners' minds and behavior while attempting to learn a new concept. Besides, the instruments were not designed and employed among EFL/ESL learners.

Thus, the current researchers found it logical to construct a Reflective Language Learning Model comprising all learning strategies involved in the process of language learning activities. The objectives of the present study were twofold: Firstly, constructing a reflective language learning instrument, and secondly, extracting a model of reflective language learning that can be used by language learners, teachers, and researchers in future studies.

METHOD

Constructing the Item

The researchers followed the stages proposed in the literature to develop a reflective language learning questionnaire model in the Iranian EFL context (Dörnyei, 2003, 2007; Coombe & Davidson, 2015). In the first step, the researchers reviewed the related literature (Dewey, 1993; Schön,1983, 1987; Kolb, 1984; 1994; 2005) to collect definitions, explanations, and concepts on the nature of reflection and reflective learning. Then, they reviewed several models (Atkins &Murphy,1993; Boud et al.,1985; Gibbs, 1988; Kolb, 1984, 1994; Moon, 2004) to understand reflective learning processes conceptualized by researchers. At this stage, the components of reflective learning were discovered. Kember et al.'s (2000) study provided a picture of different reflective and adult learning concepts. Peltier (2005) and Colomer (2013) helped discover the reflection/non-reflection dichotomy and the different views on reflection. The researchers detected some general themes at each stage and then attempted to break them into smaller components. The result was to identify 358 concepts, definitions, and activities for reflective language learning.

The researchers explored experts' opinions regarding reflective learning in the next step. They extracted seven interview questions and asked a panel of five male and female applied linguists with over twenty years of experience teaching at the university level (two professors and three associate professors) to rate them as "essential," "useful but not essential," and "not necessary" (Ayre & Scally, 2014). All experts agreed that four questions would be essential, and three were unnecessary. Content Validity Ratio (CVR) was calculated for the questions, indicating that the questions were crucial. Then, interviews were conducted with the same five experts on four validated questions (see Appendix A). Each interview session took about 45 minutes. The interviews were recorded, and the themes were extracted following a deductive approach (Bingham & Witkowsky. 2022). First, broad themes related to reflective learning were extricated and then categorized to obtain a body of experts' viewpoints. In the next step, the themes that overlapped with the concepts in the literature (at the first stage) were located, classified, and reduced in number. Repeating the procedure several times decreased the number of items to 50. After transforming the concepts into statements and revising them, the panel of experts re-examined them to construct the questionnaire draft for the pilot study.

Participants

In the first phase, 100 EFL learners (34 males and 66 females), selected based on convenience sampling, participated in piloting the newly developed questionnaire. Their age ranged between 20 and 45. All participants studied TEFL at the university in different semesters (from the 1st to the 8th). The participants' characteristics in the piloting phase were similar to the target group for whom the questionnaire was designed.

In the second stage, 398 participants were selected based on convenience sampling. They signed an informed consent and agreed to take an Oxford Placement test two weeks before answering the questionnaire to let the researchers know their English proficiency level. Then, for construct validation of the questionnaire, they answered the newly developed questionnaire. Table 1 shows their demographic information.

Piloting the Questionnaire

A primary step in developing a questionnaire is field testing, which refers to piloting with a group of respondents similar to the target population (Dörnyei, 2007). Thus, the researchers administered the 50-item reflective language learning questionnaire to the 100 participants (as explained above). Then, they entered the data into SPSS to compute its reliability via Cronbach's α, which appeared to be .943 (Table 2).

However, after examination, items 36, 43, and 46 were removed due to the low values (<.3) of corrected item-total correlations (Table 2). The analysis of the remaining 47 items, with corrected item-total correlation values over .3, showed that Cronbach's α value was .946 (Table 3), indicating an acceptable internal consistency.

Table 1

Participants' Characteristics in the Second Phase

Gender	
Male	257
Female	128

Learning Context	
University Students	322
Language Institutes Learners	63

Proficiency Level	
A2	90
B1	89
B2	93
C1	65
C2	61

Age Range	
20-24	184
25-29	56
30-34	16
35-39	20
40-44	16
45-49	14
50 or more	10
Not mentioned	69

Table 2

Item Analysis for the 50-item Questionnaire

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item 1	.516	.942	Item 26	.412	.942
Item 2	.574	.941	Item 27	.627	.941
Item 3	.429	.942	Item 28	.555	.941
Item 4	.459	.942	Item 29	.575	.941
Item 5	.370	.943	Item 30	.473	.942
Item 6	.460	.942	Item 31	.522	.942
Item 7	.486	.942	Item 32	.470	.942
Item 8	.470	.942	Item 33	.566	.941
Item 9	.474	942	Item 34	.613	.941
Item 10	.573	.941	Item 35	.447	.942
Item 11	.405	.942	Item 36	.107	.945
Item 12	.551	.942	Item 37	.618	.941
Item 13	.443	.942	Item 38	.529	.942
Item 14	.553	.942	Item 39	.505	.942
Item 15	.412	.942	Item 40	.478	.942
Item 16	.628	.941	Item 41	.481	.942
Item 17	.547	.942	Item 42	.483	.942
Item 18	.477	.942	Item 43	.205	.944
Item 19	.511	.942	Item 44	.610	.941
Item 20	.523	.942	Item 45	.613	.941
Item 21	.484	.942	Item 46	.260	.943
Item 22	.527	.942	Item 47	.594	.941
Item 23	.585	.941	Item 48	.501	.942
Item 24	.449	.942	Item 49	.574	.941
Item 25	.492	.942	Item 50	.423	.942

Table 3

Item Analysis for 47-Item Questionnaire

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item 1	.526	.945
Item 2	.572	.945
Item 3	.437	.946
Item 4	.453	.946
Item 5	.357	.946
Item 6	.468	.946
Item 7	.486	.946
Item 8	.476	.946
Item 9	.476	.946
Item 10	.575	.945
Item 11	.411	.946
Item 12	.551	.945
Item 13	.463	.946
Item 14	.577	.945
Item 15	.426	.946
Item 16	.630	.945
Item 17	.544	.945
Item 18	.462	.946
Item 19	.524	.945
Item 20	.528	.945
Item 21	.489	.945
Item 22	.533	.945
Item 23	.587	.945
Item 24	.458	.946
Item 25	.498	.945
Item 26	.409	.946
Item 27	.623	.945
Item 28	.572	.945
Item 29	.589	.945
Item 30	.462	.946
Item 31	.517	.945
Item 32	.473	.946
Item 33	.570	.945
Item 34	.607	.945
Item 35	.438	.946
Item 36	.618	.945
Item 37	.526	.945
Item 38	.493	.945
Item 39	.468	.946
Item 40	.482	.945
Item 41	.493	.945
Item 42	.618	.945
Item 43	.620	.945
Item 44	.585	.945
Item 45	480	.946
Item 46	.574	.945
Item 47	.429	.946

Validating the Questionnaire

After ensuring its face validity, computing the reliability indices, and removing redundant items, the 47-item scale was administered to 398 participants to gather data for exploratory and confirmatory factor analyses. Exploratory Factor Analysis (EFA) draws on various techniques to uncover the underlying structure and extract latent factors (Pallant, 2007). Confirmatory Factor Analysis (CFA) tests whether the data fit a hypothetically constructed model. After performing EFA, the number of items was reduced to 43. Afterward, the researchers ran a CFA to confirm the extracted factors. Linear Structural Relations Software (LISREL) was used to perform Structural Equation Modeling (SEM). The developed model was verified in the CFA. The following sections present the different steps in detail.

RESULTS

Exploratory Factor Analysis (EFA)

EFA started with data cleaning by discarding 13 questionnaires due to incomplete answers and running data analysis with 385 questionnaires. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value (.948, beyond .60) and Bartlett's Test (p<.001) verified the appropriacy of the data for factor analysis (Table 4).

Principal Component Analysis (PCA) was used to run EFA as the most commonly adopted approach. A factor analysis through varimax rotation was conducted on the underlying construct of the 47-item questionnaire. As Table 5 shows,

Table 4

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.948
Bartlett's Test of Sphericity	Approx. Chi-Square	9470.951
	df	1081
	Sig.	.000

Table 5

PCA on 47-Item Questionnaire

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	17.231	36.662	36.662	17.231	36.662	36.662	5.648	12.017	12.017
2	2.335	4.969	41.631	2.335	4.969	41.631	5.221	11.108	23.124
3	1.698	3.612	45.243	1.698	3.612	45.243	4.498	9.570	32.695
4	1.558	3.315	48.558	1.558	3.315	48.558	3.963	8.431	41.125
5	1.250	2.660	51.217	1.250	2.660	51.217	3.313	7.048	48.174
6	1.188	2.528	53.745	1.188	2.528	53.745	2.494	5.307	53.480
7	1.139	2.424	56.171	1.139	2.424	56.169	1.264	2.689	56.169

Note: Extraction Method: Principal Component Analysis

SPSS extracted seven factors, with an Eigenvalue of more than 1, that explained 56.17% of the variance. Six-point Likert scales were used for each item, ranging from 1 (false), 2 (mostly false), 3 (more false than true), 4 (more true than false), 5 (mostly true), to 6 (True).

Table 6 contains the initial commonalities before rotation. The initial communalities indicate the relation between the variable and all other variables (the squared multiple correlations between the item and all other items). As evident from Table 6, all commonalities are high (>.40) and thus acceptable. Communality values for this questionnaire ranged from 0.40 to 0.70.

As Table 7 shows, seven factors load after rotating the factors in PCA. Subsequent to checking the factor loadings, items that do not load highly on any of the factors should be excluded. Items loading above .40 are acceptable. In this phase, 44 items were acceptably loaded on the seven factors, and three (6, 12, & 35) were deleted due to item loading below .40. Table 7 lists the 12 items that have the highest and lowest item loadings: factor 1 twelve items (the highest: *item 29* to the lowest: *item 34*); factor 2, twelve items (the highest: *item 42*, the lowest: *item 41*), factor 3 six items (the highest: *item 3*, the lowest: *item 5*), factor 4 six items (the highest: *item7, the* lowest: *item 18*), factor 5 four items (the highest: *item 20*, the lowest: *item 19*), factor 6 three items (the highest: *item 47*, the lowest: *item 14*), and finally factor 7, 1 item (the highest and lowest: *item 45*).

The Scree plot in Figure 1 shows a clear break between the first and second components. The Scree plot also indicates another little break after the seventh component, recommending retaining (extracting) seven components. The results suggest that the seven factors are confirmed, and the developed items are approved. Thus, the 43-item Reflective Language Learning Questionnaire (RLLQ) is a valid and reliable data-gathering instrument.

Table 8 shows the categorization of the RLLQ for the six factors and the reliability indices for each factor. The researchers excluded factor 7 since it possessed only 1 item loading (Item 45) and was problematic for reliability and confirmatory features. The items clustering under the same factor were checked for commonality among them. The result was extracting six factors: "Cognitive," "Evaluative," "Metacognitive," "Interactional," "Reflective Journaling," and "Retrospective," the details of which are explained in the discussion section. As illustrated in Table 8, the reliability of the 43-item RLLQ is .963.

Confirmatory Factor Analysis (CFA)

After gaining the six main factors by EFA (with 43 items), the researchers ran CFA to confirm the six factors. SEM was performed employing CFA-LISREL 8.0 to examine the factors underlying reflective language learning and checking item quality. Figure 2 displays the measurement model for the

Table 6

Initial Communality Values in PCA in the 47-Item Questionnaire

	Initial	Extraction
item1	1.000	0.503
item2	1.000	0.662
item3	1.000	0.635
item4	1.000	0.563
item5	1.000	0.404
item6	1.000	0.435
item7	1.000	0.638
item8	1.000	0.627
item9	1.000	0.563
item10	1.000	0.566
item11	1.000	0.562
item12	1.000	0.584
item13	1.000	0.502
item14	1.000	0.671
item15	1.000	0.490
item16	1.000	0.515
item17	1.000	0.536
item18	1.000	0.524
item19	1.000	0.668
item20	1.000	0.689
item21	1.000	0.551
item22	1.000	0.700
item23	1.000	0.692
item24	1.000	0.512

	Initial	Extraction
item25	1.000	0.625
item26	1.000	0.481
item27	1.000	0.571
item28	1.000	0.514
item29	1.000	0.608
item30	1.000	0.535
item31	1.000	0.567
item32	1.000	0.662
item33	1.000	0.532
item34	1.000	0.551
item35	1.000	0.485
item36	1.000	0.559
item37	1.000	0.541
item38	1.000	0.541
item39	1.000	0.414
item40	1.000	0.535
item41	1.000	0.442
item42	1.000	0.619
item43	1.000	0.583
item44	1.000	0.540
item45	1.000	0.559
item46	1.000	0.590
item47	1.000	0.611

RLLQ with standardized estimates (see Appendix B for the final version of RLLQ).

Inspecting the initial normed chi-square (CMIN/DF), PGFI, NFL, and RMEAS (Table 9) showed a relatively fit structured model falling within the acceptable range of 1 and 3. A few modifications (suggestions) were observed; however, they were ineffective and made no significant improvement in the model. The soundness of the factor structure for the Reflective Language Learning Model was examined using CFA comprising the six factors (Table 9). The CFA measurement model indicated an acceptable overall model fit: df=1.62, PGFI=0.73, NFI=0.98, and RMSEA=.054.

DISCUSSION

The researchers constructed and validated a questionnaire to answer the first research question, which addressed the main components of Iranian EFL learners' language reflectivity. Running EFA and CFA resulted in the development of a six-factor model that showed the elements of Iranian EFL learners' language reflectivity, as follows:

Cognitive Process: Items Loading on Factor 1 Capture Cognitive Strategy in Learning a Concept

Cognitive strategies include different mental processes in language learning, such as inferencing, generalization, deductive learning, monitoring, and memorization (Oxford, 2017; Richards & Schmidt, 2002). Similarly, in the items clustered around this factor, learners are involved in some mental activity, such as conceptualizing learning experiences by thinking and questioning about learning processes and procedures used in learning (items 9, 10, 32), thinking about learning materials to improve learning (items 13, 14, 15, 19,

Table 7

Rotated Factor Matrix[a] in PCA in the 47-Item Questionnaire

47-items	43-items	Component						
		1	2	3	4	5	6	7
Item29	Item27	.670						
item27	item25	.654						
Item25	Item23	.647						
Item33	Item31	.567						
Item24	Item22	.560						
Item21	Item19	.532						
Item10	Item9	.507						
Item17	Item15	.479						
Item11	Item10	.476						
Item15	Item13	.474						
Item16	Item14	.463						
Item34	Item32	.455						
Item42	Item39		.663					
Item40	Item37		.623					
Item43	Item40		.622					
Item44	Item41		.586					
Item38	Item35		.476					
Item28	Item26		.474					
Item37	Item34		.459					
Item30	Item28		.452					
Item39	Item36		.447					
Item36	Item33		.435					
Item13	Item11		.425					
Item41	Item38		.400					
Item35								
Item3	Item3			.704				
Item2	Item2			.701				
Item1	Item1			.654				
Item4	Item4			.611				
Item9	Item8			.557				
Item5	Item5			.450				
Item12								
Item7	Item6				.746			
Item32	Item30				.706			
Item8	Item7				.661			
Item31	Item29				.644			

47-items	43-items	Component						
		1	2	3	4	5	6	7
Item26	Item24				.558			
Item18	Item16				.533			
Item6								
Item20	Item18					.765		
Item23	Item21					.726		
Item22	Item20					.726		
Item19	Item17					.711		
Item47	Item43						.716	
item 46	item 42						.592	
Item14	Item12						.407	
Item45								**.542**

Note: *Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalizationa*
[a] Rotation converged in 8 iterations.

Figure 1

Scree plot for RLLQ in PCA

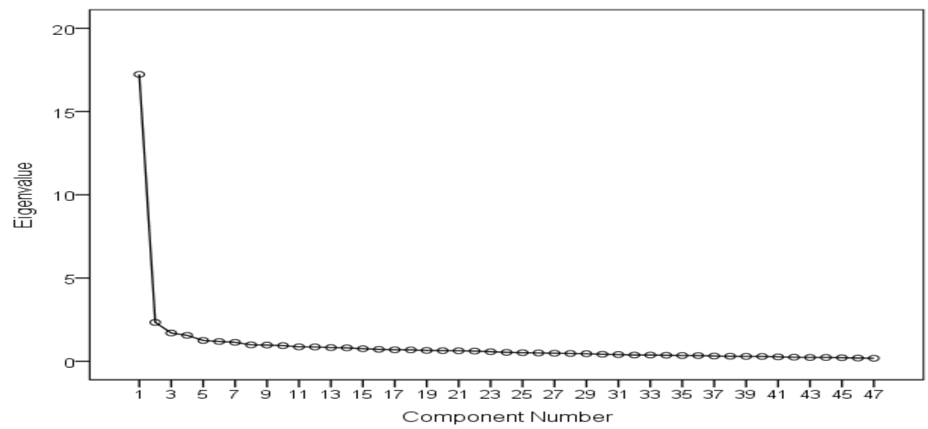

Table 8

Six Factors of 43-Item RLLQ with the Related Reliability Indices

Factors	No. of Items	Cronbach's Alpha	Reliability Value
1) **Cognitive** (Items 9, 10, 13, 14, 15, 19, 22, 23, 25, 27, 31, 32)	12		0.906
2) **Evaluative** (Items 11, 26, 28, 33, 34, 35, 36, 37, 38, 39, 40, 41)	12		0.896
3) **Metacognitive** (Items 1, 2, 3, 4, 5, 8)	6		0.815
4) **Interactional** (Items 6, 7, 16, 24, 29, 30)	6		0.748
5) **Reflective** (Items 17, 18, 20, 21)	4		0.839
6) **Retrospective** (Items 12, 42, 43)	3		0.687
Total Questionnaire	43		0.963

Figure 2

Reflective Language Learning Model with Standardized Estimates in RLLQ

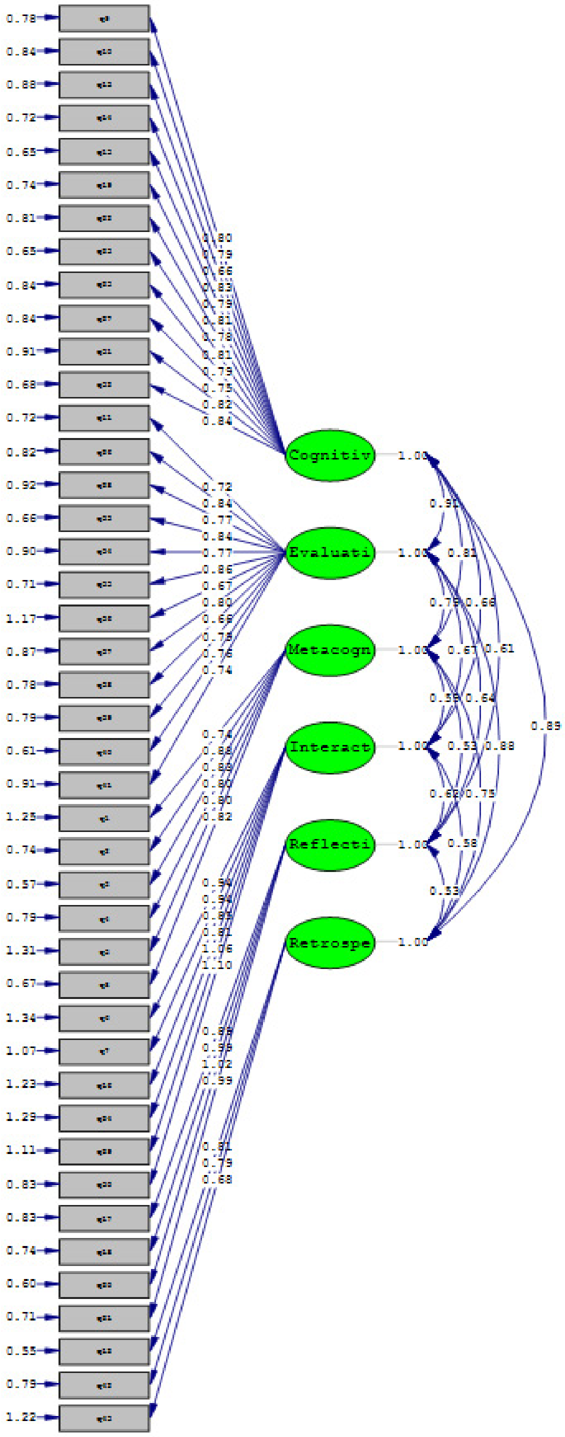

Table 9

Model Fit Analysis Summary

CMIN/DF (1 ≥, ≤ 3)	PGFI (≥ .60)	NFI (≥ .90)	RMSEA (≤ .06)
1.62	.73	.98	.054

22, 23, 27), internal self-dialog to retain information (item 31), thinking about learning processes and moving between actions repeatedly to gain new understanding (item 25). Therefore, it was named "Cognitive Factor."

Evaluative Activity: Items Loading on Factor 2 Deal with Evaluation

Richards and Schmidt (2002) consider self-evaluation as "checking one's own performance on a language learning task after it has been completed or checking one's success in using a language" (p.475). All items loaded under this factor deal with issues, including evaluating English learning experiences and making learners self-aware and thoughtful to understand and deepen their learning (items 11, 26, 28, 36, 37, 38, 40). Likewise, learners' reflecting on learning activities has improved learning (item 33), reflecting on learning materials during and after using them has facilitated learning (items 34, 35), thinking over the materials has empowered learners to become an agent of change in learning (item 41), and reflecting on learning experiences has eliminated the problems in the process of learning (item 39). Thus, it was labeled "Evaluative Factor."

Metacognitive Process: Items Loading on Factor 3 Tap into Metacognitive Strategies

Metacognitive strategies involve planning, monitoring, thinking, and evaluating a learning task during or after it occurs (Khellab et al., 2022; Richards & Schmidt, 2002). In the items loaded around this factor, learners think about learning experiences to do them better for the second time (item 1), reflect on the thinking process to improve learning procedures (item 3), reflect on learning beliefs and values to understand better to enhance their learning (items 4, 5), analyze learning experiences to get a new understanding (item 2), think over learning experiences to evaluate the outcome of learning (item 8). Therefore, it was named "Metacognitive Factor."

Interactional Activity: Items Loading on Factor 4 Deal with the Interaction Occurring Between a Learner and Themselves, Context, or any Other Person

Interaction is inevitable in any successful language-learning activity and can be used differently. Therefore, learners must have opportunities to be engaged in interactional activities in various ways, such as group discussions, collaboration, and participation (Loewen & Sato, 2018). Thus, in the items loaded under this factor, learners seek help from classmates and instructors to check their understanding (items 6 &7), raise questions to understand what has happened in the process of language learning (item 16), reflect on classmates' views to improve learning (item 24), interact with instructors, and participate in group discussions to share meaning (items 29, 30). Therefore, it was labeled "Interactional Factor."

Reflective Journal: Items Loading on Factor 5 are Concerned with Reflective Journaling

A journal is "a notebook or book in which students write about experiences both in and out of school or record responses and reactions to learning and learning activities" (Richards & Schmidt, 2002, p. 300). In this study, the effect of reflective journaling on language learning was significant, as evidenced by the four items answered by language learners. In the items clustered under this factor, learners assert that journal writing contributes to their success in language learning (item 17), stimulates new thoughts and questions for discussion (item18), gives them more significant insights into the habit of learning (item 20), and stimulates learners' reflection (item 21). Therefore, it was called "Reflective Journal Factor."

Retrospective Activity: Items Loading on Factor 6 Deal with Retrospection

ELT experts have frequently discussed the relationship of retrospection with reflective learning to reinforce professional development (Pietrzak, 2019; Van der Sluis et al., 2017). Wedell (2022) asserts, "English language teaching practices in many countries and contexts are subject to frequent change as innovation is introduced to reform teaching and learning practices (p. 1)". In this type of activity, learners refer to previous activity and scrutinize it to categorize the concepts, relate them, and find the differences or similarities to develop a new understanding and innovative idea. Thus, in the items loaded under this factor, learners think about an experience and relate new information to the previous one to improve their learning (item 12), contrast two things to find differences they have made in their learning (item 42), refer to their previous notes in different intervals to improve their learning (item 43). Therefore, it was labeled "Retrospective Factor."

The second research question focused on the validity and reliability of the newly developed instrument. The results of EFA and CFA obtained from LISREL urged the researchers to verify that the 43-item RLLQ was valid and reliable. This finding implies that future studies can employ the questionnaire and the extracted model to measure learners' degree of reflectivity.

As this study is the first attempt to construct and validate a closed-ended reflective learning scale in the Iranian context, the researchers cannot compare it with similar ones. However, compared to open-ended scales (Bell et al., 2014; Feng, 2016), RLLQ seems more beneficial to language learners since it provides a comprehensive range of activities under each factor. Besides being a closed-ended instrument, RLLQ shares the priority of such tools: it is objective and can be answered, analyzed, and quantified with fewer problems than open-ended questionnaires to provide straightforward results (Dörnyei, 2003).

Moreover, RLLQ shows how to prepare learners to engage in reflective learning, an advantage that is not addressed in previous instruments like Colomer et al.'s (2013) Self-reported Reflective Learning Questionnaire. Besides, RLLQ explores various reflective learning strategies proposed in the literature, such as cognitive (Yesilbursa, 2011), metacognitive (Sellars,2013), and individual and cooperative activities (Cooke, 2013; Erdogan, 2019).

Most previous studies have employed journal writing to explore reflective learning (Bruno & Dell'Aversana, 2017; Hussein, 2018; Ogbuanya & Owodunni, 2015). However, the limitation of journal writing is that it lacks a "pre- and post-design" to examine the change in reflective thinking level (Kember et al., 2000, p. 382). Additionally, the approach cannot provide information about learners' strategy use, which are factors that indicate the advantage of RLLQ.

Likewise, RLLQ has advantages over most of the previous closed-ended questionnaires (Kember et al., 2000; Min & Park, 2019; Peltier et al., 2005) since none of the tools prepare students for reflective practice. What is significant in reflective learning is not determining the relationship of a variable with another or assessing the impact of a variable on another but helping learners engage in reflective activities. Thus, the result of the present study in extracting a model of reflective language learning and giving a complete picture of the various activities under each factor can be employed by language learners and practitioners in learning and teaching a concept.

Implications of the Study

Different groups can benefit from the substantial implications of the present study. The RLLQ developed in this study presents a detailed picture of the six components of reflective language learning and the activities related to each factor. Thus, on a theoretical basis, it can help educators and SLA researchers understand the dimensions of reflective learning and teaching in an EFL context. Additionally, the activities proposed in the RLLQ allow language learners to use the activities to practice reflective learning and engage in experiential learning to improve their English language proficiency. The activities can also guide students' learning and help them follow a more organized procedure in language learning. Accordingly, L2 learners can use the RLLQ to examine the amount of their engagement in reflective language learning activities to become skillful and self-regulated learners. Teachers can also use RLLQ to explore learners' reflective strategies while engaged in a learning activity. Teachers can adjust their instruction to students' language levels by pinpointing learners' weaknesses and strengths. Besides, language teachers and educators can use RLLQ as a diagnostic measure to examine learners' engagement in reflective practice.

CONCLUSION

The researchers developed a reflective language learning questionnaire to be implemented in the Iranian EFL context. The study first showed the importance of reflective learning and discussed the role of different models in shaping such learning. Then, following several procedures, the researchers developed the RLLQ to cultivate reflective learning practices and make reflective learning measurable. However, the findings might not be generalizable to contexts other than Iran. Furthermore, since the context of the study was Kurdistan, Iran, a nationwide research study can verify its applicability to other settings inside and outside the country. The researchers suggest replicating the study with students majoring in different fields, such as ESP courses. Additionally, studying learners with diverse learning abilities and considering personality characteristics can be the subject of further studies to verify the reliability and validity of RLLQ. Future studies can examine whether incorporating RLLQ can contribute to personalized learning.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Salman Asshabi: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing; Other contribution.

Mojgan Rashtchi: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing; Other contribution.

Massood Siyyari: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing; Other contribution.

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APPENDIX A

Experts’ Interview Questions

1. How do you define, explain, and perceive reflective learning?
2. How do you think reflective learning occurs?
3. What are the different stages of reflective learning?
4. What strategies, techniques, and procedures do you suggest for reflective learning?

APPENDIX B

This questionnaire aims to understand what shapes the reflectivity components of language learners in the Iranian context. There are no wrong or right answers. You are free on whether to write your name or not. The questionnaire focuses on your personal opinions.

Please mark the number from 1 to 6, which best describes your behavior.

1. False 2. Mostly false 3. More false than true 4. More true than false 5. Mostly true 6. True

	Items	False	Mostly false	More false than true	More true than false	Mostly true	True
1.	I deliberately step back and think about my previous English learning experience to do it better for the second time.	1	2	3	4	5	6
2.	I regularly analyze my English learning experiences to get a new understanding.	1	2	3	4	5	6
3.	I reflect on my thinking processes to improve my English learning procedures.	1	2	3	4	5	6
4.	I reflect on my learning beliefs to improve my English learning behaviors.	1	2	3	4	5	6
5.	I reflect on my life values to see whether they influence my English learning	1	2	3	4	5	6
6.	I reflect on my English learning experiences and seek help from my classmates to check my understanding.	1	2	3	4	5	6
7.	I reflect on my English learning experiences and seek help from my instructor to check my understanding.	1	2	3	4	5	6
8.	I review my English learning experiences to evaluate the outcome of my learning activities.	1	2	3	4	5	6
9.	I conceptualize my English learning experiences by thinking about the learning processes.	1	2	3	4	5	6
10.	I conceptualize my English learning experiences by questioning the learning materials.	1	2	3	4	5	6
12.	I review my English learning experiences and relate the new information to what I already knew to improve my learning.	1	2	3	4	5	6
13.	I think about my English learning experiences to meaningfully transfer them to real-life contexts.	1	2	3	4	5	6
14.	I reflect on English learning activities to help me draw on my previous experiences to understand new ideas.	1	2	3	4	5	6
15.	I reflect on English learning activities and relate the new ideas to my previous ones to support my learning.	1	2	3	4	5	6
16.	I ask thoughtful questions about the language learning process in the classroom to understand what has happened.	1	2	3	4	5	6
17.	Reflective journaling contributes to my success by providing insights into academic subjects to increase my responsibility for learning	1	2	3	4	5	6
18.	Reflective journaling has stimulated new thoughts and questions in me for discussion.	1	2	3	4	5	6
19.	I reflect on the English learning materials to identify my strengths and weaknesses to improve my learning.	1	2	3	4	5	6
20.	Reflective journaling has given me greater insights into my learning habits.	1	2	3	4	5	6
21.	I have realized that reflective journaling has stimulated my reflection.	1	2	3	4	5	6
22.	I think about my English learning process to shape future learning activities.	1	2	3	4	5	6

Items	False	Mostly false	More false than true	More true than false	Mostly true	True
23. I reflect upon the relations of the English learning materials to improve my learning.	1	2	3	4	5	6
24. I reflect on my classmates' views concerning learning materials to improve my learning.	1	2	3	4	5	6
25. I think over the language learning process and repeatedly move between action and the learning process to gain a new understanding.	1	2	3	4	5	6
26. I critically evaluate my English learning practice to deepen my learning.	1	2	3	4	5	6
27. I converse with myself about the English learning materials to rearrange and classify them to learn better.	1	2	3	4	5	6
28. I reflect on the English learning materials by referring to my written notes to improve my learning.	1	2	3	4	5	6
29. I actively interact in group discussions to analyze the English learning materials and share meaning.	1	2	3	4	5	6
30. I interact with my instructor to analyze the English learning materials and share meaning.	1	2	3	4	5	6
31. I interact with myself and retain information concerning the English learning materials through internal dialogue.	1	2	3	4	5	6
32. I conceptualize the English learning materials by thinking about the procedures I used in learning.	1	2	3	4	5	6
33. I reflect on my English learning experiences to recollect as much information as possible to understand the materials.	1	2	3	4	5	6
34. I reflect on the different aspects of English learning materials during the learning activities to facilitate my learning.	1	2	3	4	5	6
35. After the learning activities, I reflect on different aspects of English learning materials to facilitate my learning.	1	2	3	4	5	6
36. I generally think of finding another way to work on English materials.	1	2	3	4	5	6
37. I usually reflect on the errors in my English learning materials to improve learning.	1	2	3	4	5	6
38. I usually think about how I should attempt to learn English materials better.	1	2	3	4	5	6
39. Reflecting on my past experiences helps me eliminate the problems I encountered while learning English materials.	1	2	3	4	5	6
40. Reflecting on language learning activities helps me become more thoughtful and less impulsive in my following learning activities.	1	2	3	4	5	6
41. Reflection has empowered me to become an agent of change in the English learning environment.	1	2	3	4	5	6
42. I reflect on my English learning experience and think about what difference it might make in improving my learning.	1	2	3	4	5	6
43. Referring to my written notes on the previous sessions at later times improves my learning.	1	2	3	4	5	6

Please provide the following information by ticking (√) in the box or writing your response in the space.

Gender: Male □ Female □	Learning context: University □ Institute □
Age: Month, day, year	Name of the University ....
Years of studying experience	Term: ....
Marital status: Single □ Married □	

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Exploring Reading Attitudes, Reading Self-Efficacy, and Reading Proficiency in a Blended Learning Context Among EFL Learners

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ABSTRACT

Background: Affective variables such as second language (L2) reading attitudes (RAs) and L2 reading self-efficacy (RSE) have been regarded as factors which influence academic results in regular face-to-face reading instruction. Research has reported that although positive RAs among adolescents may decline as they go through school, they still engage in diverse formal and informal reading environments involving printed and/or digital resources. These attitudes can be impacted by the sudden change in the way instruction is delivered in blended learning contexts which emerged due to the Covid-19 pandemic.

Purpose: The present study applied a mixed methods approach to explore the relationship between the L2 RAs, L2 RSE, and L2 reading proficiency (RP) of Chilean high school students in a blended-learning context.

Method: A sequential explanatory mixed-methods design was adopted to gather data from 124 Chilean high school students. The quantitative data collection was carried out by means of two adapted surveys assessing RAs and RSE, while the reading section of the Preliminary English Test (PET) was administered to determine the RP of participants. The qualitative aspect of the study involved semi structured interviews with ten participants.

Results: Participants displayed moderately positive levels of RA and RSE. Furthermore, a strong correlation was found between RAs and RSE, and RSE was significantly correlated with RP. Qualitative data analysis revealed that the emergency remote teaching context during the pandemic affected student reading behaviour in relation to the attitudes towards recreational digital reading, and that teacher instruction can influence their RAs and RSE.

Conclusion: It is essential for EFL teachers to nurture student L2 RSE by means of effective and consistent reading activities with increasing challenge that include synchronous and asynchronous learning. Since most participants preferred to complete reading tasks in a recreational digital setting rather than an academic digital one, teachers should incorporate academic reading activities which are more engaging and contextualised to student age and preferences to effectively use the synchronous and asynchronous time at their disposal in blended settings.

KEYWORDS

L2 reading attitudes, L2 reading self-efficacy, L2 reading proficiency, emergency remote teaching, EFL learning

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INTRODUCTION

For many English as a Foreign Language (EFL) learners, reading is a fundamental means to study the language, expand their vocabulary and grammar, and approach foreign cultures (Oh, 2016). Research has addressed the multidimensional nature of L2 reading from a perspective that considers affective factors such as L2 reading attitudes, defined as the feelings and emotions towards reading (Lee & Schallert, 2014; Yamashita, 2013). In addition, researchers have sought to understand the impact of L2 reading self-efficacy: i.e., the perceived degree of success with which individuals can accomplish a reading task – (Fathi

& Soleimani, 2020; Li & Wang, 2010) on L2 learning. These authors have placed significant importance upon the role of affective variables in learners' L2 reading achievement. For example, attitudes towards learning and beliefs can influence the reading process (Fathi & Soleimani, 2020), since even fluent readers can develop negative attitudes towards reading and choose not to read (McKenna et al., 1995). Day and Bamford (1998) suggested that among the factors contributing to the formation of L2 reading attitudes, the L2 classroom environment is key. Similarly, Yamashita (2013) argued that instructional reading design is fundamental to developing positive L2 reading attitudes among students.

The Covid-19 pandemic forced students to engage in remote learning activities involving a blended learning context. In the emergency online setting prompted by the pandemic, students reported increased levels of anxiety, stress, and depression (O'Donoghue et al., 2021; Yang et al., 2021). Thus, the psychological, cognitive, social, and environmental conditions influencing learning must be considered when understanding performance in such contexts (Ismailov & Ono, 2021). School routines, including EFL instruction, had to be rapidly adapted to emergency remote teaching (ERT), defined as "a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances" (Hodges et al., 2020, p. 6). The sudden change has prompted educational institutions to adjust their curricula and methods, in such a way that face-to-face learning can be replaced partially (i.e., blended learning courses), or fully (i.e., fully online learning; Cancino & Towle, 2022). Although research reports a lessening in the quality of reading attitudes among students as they complete their schooling. It also suggests that adolescents engage in diverse formal and informal reading environments involving printed and/or digital resources (Mckenna et al., 2012), which can also be found in blended learning contexts. This distinction also highlights differences in the performance of students who are identified as poor or struggling readers in a traditional setting, but who display better reading attitudes and outcomes in a digital environment. Therefore, it is necessary to consider the reading purpose of and medium, in order to determine reading attitudes (Conradi et al., 2013). L2 blended learning has been studied mainly at tertiary education levels (Thoms, 2020) since universities and other educational institutions typically offer blended lessons as part of their programs. However, the emergency remote teaching context prompted secondary education institutions to introduce blended learning approaches, in order to reach students in their homes. Examining L2 reading attitudes, L2 reading self-efficacy and L2 reading proficiency in a high school blended learning setting prompted by an emergency remote teaching environment can contribute to understanding L2 reading processes from a perspective that considers affective factors (Dizon & Thanyawatpokin, 2021).

Reading Attitudes (RAs)

The construct of RA derives from an early definition of attitude introduced by Fishbein and Ajzen (1975). They conceptualised it as "a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object" (p. 6). Research has supported the notion that attitudes are acquired, malleable and the product of numerous experiences involving the object (Miche et al., 2014). More specifically, Artamonova (2020) defines language attitude "as an evaluative view of a particular language held by an individual or a group of individuals regarding any aspect of the language [...] or any combination of aspects inherent to the language or associated with it..." (p. 810). An individual's attitudes towards language arise from diverse aspects such as the sounds of the language and the culture associated with that language. Positive language attitudes can lead to constructive behaviour (i.e., reading) in relation to a language and, in turn, the experiences that arise from this behaviour can reinforce or modify the attitudes towards that language (Artamonova, 2020).

Reading attitudes were initially defined by Alexander and Filler (1976) as "a system of feelings related to reading which causes the learner to approach or avoid a reading situation" (p. 1). Similarly, Smith (1990) stated that reading attitude is "a state of mind, accompanied by feelings and emotions, that makes reading more or less probable" (p. 215). These reading attitudes are likely to develop from previous experiences at home and in school settings. Both definitions suggest that RAs determine the desire an individual expresses towards the performance of a certain reading task. In addition, formal or informal learning experiences are fundamental to the creation of such RAs and hence, the behaviour a learner presents towards reading. Regarding the constituents of RAs, several authors agree that they comprise affective, behavioural, and cognitive aspects (Lee & Schallert, 2014; Matthewson, 1994; McKenna et al.,1995; McKenna et al., 2012). In addition, RAs have been found to develop from four main reading experiences linked to the purpose (academic or recreational) and the medium (print or digital) for a reading activity (McKenna et al., 2012; Conradi et al., 2014).

RAs have been linked to motivation (Schiefele et al., 2012) and reading achievement (Dörnyei & Csizér, 2002). Jang et al. (2015) stated that reading attitudes along with other concepts such as reading self-efficacy, interest, and self-concept are motivational factors which configure an individual's motivation for learning. Focusing on the acquisition and development of L2 RAs, Day and Bamford (1998) developed a model with four sources contributing to the formation of L2 reading attitudes: L1 reading attitudes, previous L2 reading experiences, attitudes towards the L2 and the related culture and people (language attitudes), and L2 classroom environment. In line with this model, Crawford (2001) found that the amount of L1 reading done, the experiences abroad, and the instructional setting predicted the L2 RAs of 182 Italian adult EFL learners. Ro and Chen (2014) replicated the study with 60 advanced EFL learners and found that learners with positive RAs tend to read more, but that previous experience in the target language culture and previous English study did not predict reading habits and attitudes. These studies highlight the dynamic nature L2 RAs in relation to factors such as previous experiences with the language, reading habits, and the instructional setting. Focusing on the impact of the type of L2 reading approach, Yamashita (2013) found that a 15-week extensive reading course had a positive influence on the feelings and emotions of 61 Japanese undergraduate EFL learner. She also found that the reading sessions helped increase comfort and intellectual value among university students towards L2 reading, while decreasing L2 reading anxiety. Similarly, Lee et al. (2015) studied 124 adolescent EFL Korean learners and the effects that extensive reading had on their RAs and grammar knowledge when compared to a regular translation method. Participants' responses to linguistic tests and attitude surveys revealed that both forms of reading instruction yielded positive grammar knowledge gains, and that extensive reading decreased positive RAs in low proficiency students and increased them in higher-level students. Finally, Lee and Schallert (2014) investigated the contributions of L2 RAs and language proficiency to the reading achievement of 289 South Korean middle school students. They found that L2 proficiency was associated with positive RAs and fewer negative feelings about reading in the language. In addition, factors such as access to books, length of private instruction, teachers' encouragement, and gender predicted the nature of L2 reading attitudes. These results suggest that the development of positive L2 RAs can be mediated by contextual and cognitive factors.

Reading Self-Efficacy (RSE)

Self-efficacy can be defined as the "beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). In educational settings, research has shown that self-efficacy is a major factor influencing learner interest, persistence in learning, goal setting, and self-regulation (Raoofi et al., 2012). More specifically, self-efficacy in foreign language learning affects learner performance in various language domains and can predict L2 achievement (Hsieh & Kang 2010; Mills et al., 2006). Self-efficacy has been addressed in relation to specific L2 language skills, such as reading self-efficacy (RSE) – that is, the perceived degree of success with which individuals can accomplish a reading task – (Fathi & Soleimani, 2020; Li & Wang, 2010). For example, Mills et al. (2006) conducted research on the impact of L2 RSE and L2 reading anxiety on the L2 reading and listening proficiency of 95 university students enrolled in French courses at a university in the United States. Results indicated that there was a significant relationship between RSE and reading proficiency. Participants who reported higher RSE achieved higher scores in reading proficiency tests. That is, students who perceived themselves as good readers were more likely to be proficient readers, results that are in line with Oh (2016).

Focusing on L2 reading strategies, Li and Wang (2010) investigated the relationship between L2 RSE and L2 reading strategy use among 182 Chinese sophomore English majors. Findings revealed that students with higher L2 RSE used more reading strategies in comparison to less self-efficacious readers. The type of instruction style adopted is also a relevant variable in the development of RSE. Fathi and Soleimani (2020) conducted a quasi-experimental study with 48 Iranian young learners, in order to assess gains in L2 reading attitudes and L2 RSE after a 12-week treatment involving a cognitive approach to reading instruction. The results indicated that the experimental group significantly outperformed the control group by increasing their L2 RSE. Neither of the groups reported any positive changes in their L2 RAs, leading the researchers to conclude that RAs are likely to develop over longer periods of time. Overall, the literature discussed above suggests that L2 RAs and L2 RSE are related to previous reading experiences, reading instruction, and strategy use, and can thus influence reading proficiency and achievement.

The Emergency Remote Teaching (ERT) Context

Due to the Covid-19 pandemic, government restrictions forced schools to modify their instructional setting. Many students completed their schooling under the modality of blended lessons, i.e., some classes were held face-to-face at school and others were delivered online through asynchronous tasks (Grgurović, 2017). In online and blended learning settings, the use of learning management systems proved to be useful regarding course organisation, student interaction, and performance (Francom, 2020). Computer mediated communication also gained relevance as video conference software tools such as Zoom were used to maintain remote interaction (Lowenthal et al., 2020). Alternative approaches to maintaining communication such as asynchronous videos were also utilised since some institutions sought to reduce the stress that implied spending many hours in synchronous sessions (Lowenthal et al., 2020). Indeed, emotional aspects related to stress and the well-being of students have been considered to evaluate the effectiveness of an ERT approach. Learners have reported anxiety and stress in online learning settings (Dizon & Thanyawatpokin, 2021), leading them to lose motivation and fail classes during the pandemic (de Souza et al., 2020). Reading, just as any other aspect of language learning, has affective components (Dörnyei & Ryan, 2015) such as reading attitudes and reading self-efficacy which can influence reading performance (Fathi & Soleimani, 2020). The role which those affective variables play in engaging individuals in L2 reading has earned greater recognition (Bernhardt, 2010; Lee & Schallert, 2014). In ERT online learning contexts, addressing these variables is essential to understanding how learners have experienced significant levels of anxiety, stress, and depression because of the pandemic (Yang et al., 2021). L2 reading attitudes in online settings might differ from face-to-face L2 reading attitudes due to the differences in teacher rapport (Fithriani & Alharbi, 2021). Furthermore, the reading self-efficacy beliefs of students can be affected by the current need of employing digital sources of information and instruction, as reading digital resources presents distinct challenges when compared to reading printed resources. In blended learning settings, it becomes relevant to acknowledge students' feelings, emotions, and perceptions of self-concept towards a reading situation, since these students may have developed attitudes during the ERT context that shaped their learning behaviours. Thus, the present study sought to apply a mixed methods approach to explore the perceived L2 reading attitudes (RAs) and L2 reading self-efficacy (RSE) beliefs of 124 high school EFL learners in a blended learning context, and to establish relationships between those variables and L2 reading proficiency (RP) in such context. The following research question is addressed:

How are the L2 reading attitudes and L2 reading self-efficacy beliefs of ELF learners related to L2 reading proficiency in a blended learning context?

METHOD

Research Design

A sequential explanatory mixed-methods design was followed. Quantitative data was gathered from participants which was then further enriched through the gathering of qualitative data (Creswell & Guetterman, 2018). The quantitative data collection was carried out by means of two adapted surveys assessing RAs (Conradi et al., 2013) and RSE (Wang et al., 2014). In addition, the reading section of a language proficiency test (Preliminary English Test PET) was administered to determine reading proficiency. The qualitative aspect of the study involved semi structured interviews with ten participants.

Participants and Context

The study was carried out with 16-17-year-old high school students in Chile. Since one of the researchers had access to a secondary educational institution, convenience sampling was used in the quantitative stage. The participants were 124 (65 females, 59 males) 11th graders who had transitioned from a face-to-face learning delivery setting (with six weekly hours of EFL instruction) to a blended learning context in 2021. The blended method involved alternating between one week with two hours of synchronous online lessons, and one week with two hours of face-to-face lessons. In addition to the lesson design, task completion, and assessment issues encountered due to reduced instruction time, reading activities during class were limited by the context. The use of face masks and physical distancing in face-to-face lessons prompted teachers to restrict activities to individual tasks or group activities with scarce interaction among peers. In addition, lessons were shortened for teachers to comply with the school schedule and the Ministry of Education's requirements. Purposeful sampling was used to identify ten students with specific RA and RSE profiles that completed the semi-structured interviews.

Instruments and Materials

Survey for Adolescent Reading Attitudes (SARA)

The instrument used to measure students' L2 reading attitudes was an adapted version of McKenna et al.'s (2012) survey for adolescent reading attitudes (SARA). The SARA was originally designed to assess L1 reading attitudes of adolescent learners. It contains 18 items addressing reading attitudes towards four components: academic print ("How do you feel about reading a novel for class?"), academic digital ("How do you feel about reading news online for a class?"), recreational print ("How do you feel about reading a book in your free time?"), and recreational digital ("How do you feel about texting or emailing friends in your free time?). Each answer was scored by using a 6-point Likert scale ranging from 1 ("very bad") to 6 ("very good"). The SARA survey has been validated in studies assessing reading attitudes in adolescents (Conradi et al., 2013; Wang & Jin, 2020) and good reliability (Cronbach's α over 0.72 for the components and over 0.85 for the total scale) was reported. The SARA survey was translated into Spanish, the first language of the participants (see appendix A). Back translations were performed by another researcher who proposed changes to the grammar of the items that improved the adaptation before submitting it to the pilot procedures.

Reading Component of Questionnaire of English Self-Efficacy (QESE)

Reading self-efficacy (RSE) was assessed by means of a component in the questionnaire of English self-efficacy (Wang et al., 2014). The 32-item survey was created to assess self-efficacy in the four language skills (listening, speaking, reading, and writing). In this study, only the eight items contributing to the reading self-efficacy component were included (e.g., "Can you understand new reading materials selected by your English instructor?". The eight items included in the reading component presented a 7-point rating scale ranging from 1 ("I cannot do it at all") to 7 ("I can do it very well"). Each item begins with the phrase "Can you...?" to measure students' perceptions regarding their capability rather than the intention of performing certain actions (Bandura, 2006). As with the SARA survey, the items in the RSE component underwent a process of translation and back translation (the adapted instrument can be seen in appendix B). Wang et al. (2014) reported optimal internal consistency for the instrument (Cronbach's α = 0.96).

Reading Comprehension Section of Preliminary English Test (PET)

In order to measure the level of L2 reading proficiency (L2 RP) among students, the reading comprehension section of the Preliminary English Test (Cambridge English Language Assessment, 2014) was administered. This test assesses the four language skills at an intermediate B1-B2 level (Common European Framework of References for Languages). The reading section includes 35 items divided in five different sections addressing reading comprehension and the use of vocabulary in context. Although instructions for the completion of the test were given in Spanish, instructions for each section and the items were presented in their original L2 format.

Semi-Structured Interviews

Semi-structured interviews allow researchers to ask participants for additional information and take the conversation to a point that is of interest to the topic. This can deepen the understanding of the quantitative data gathered with adolescent learners. The interview protocol included main general questions addressing specific data collected in the SARA and the QESE reading component. The questions examined factors influencing behaviours towards reading (e.g., "What experiences have negatively or positively impacted the way you feel when you read in English? Why?"). The interviews were conducted in Spanish to prevent the L2 from negatively impacting participants' thinking processes. Pseudonyms were used to refer to the participants in the analysis.

Procedures

Pilot Study Procedures

The SARA, the QESE reading component, and the reading section of the PET were piloted with a group of 15 students in 11th grade who completed the instrument via a Google Forms link, the format chosen for the study. No major comprehension issues were reported by the participants regarding the surveys, and the interface of the reading section of the PET was fixed after students reported they had to scroll up and down frequently to read a text and answer questions. The semi-structured interview protocol was piloted with two students via Zoom to assess the length of the session and organise the topics in the interview.

Data Collection and Method of Data Analysis

Since the participants were 16-17-year-old high school students, informed consent was obtained from their parents before securing the participants' assent. An information sheet outlining the study was sent to the participants' parents. They were told that all the information collected would remain anonymous, and that neither the names of the participants nor their personal information would be published or shared. Once consent and assent were secured, the researchers asked the participants to enter a computer lab where they could access a Google Forms link to the SARA and the QESE reading component. The same procedures were carried out for the completion of the reading component of the PET, two weeks later.

Regarding the semi-structured interview selection procedures, the participants were chosen based on their survey data profiles. The scores in the SARA were grouped following guidelines from Conradi et al. (2013), identifying low (1-2.9), medium (3-4), and high (4.1-6) RA levels. These guidelines were also adapted for the RSE component in the QESE (Wang et al., 2014), where scores were categorised as low (1-2.9), medium (3-5), and high (5.1-7). Finally, the reading PET results were categorised as low (A1-A2) and high (B1-B2), according to Cambridge Assessment. This process resulted in the identification of ten participants who displayed four distinct profiles: medium RA, low RSE and high RP (three participants); high RA, high RSE and high RP (three participants); medium RA, low RSE, low RP (two participants); and high RA, high RSE and low RP (two participants). The parents of the ten participants were individually contacted via e-mail so that they could give their consent for the interviews, which were conducted via Zoom and lasted approximately 35 minutes. Table 1 presents the profiles of the interview participants.

With regard to the method of analysis for the quantitative data, descriptive analysis (means and standard deviation), and inferential statistics (correlational analysis between RA, RSE, and RP) were carried out with the survey data on SPSS v27 (IBM Corp., 2020). Cronbach's alpha values for the SARA components and the QESE reading component were optimal (α > .819), which suggests good reliability and confirms previous values provided in the literature. As for qualitative data analysis, thematic analysis was used, since this approach allows for the identification, analysis, organisation, description, and reporting of themes found in a data set (Braun & Clarke, 2006). Thematic analysis also prompts the researcher to examine participants' perceptions by highlighting similarities and differences among their opinions and generating unanticipated insights (King, 2004). Six steps were followed by means of an iterative and reflective approach to the analysis of data, based on Nowell et al. (2017): familiarizing with the data, generating initial codes, searching for codes, reviewing the data, defining themes, and naming them.

Table 1

Profiles of Participants for the Semi-structured Interviews

Participant	Gender	Age	Reading Attitude	Reading Self-efficacy	Reading Proficiency
Andrés	Male	17	Medium	Low	High
Ivania	Female	17	Medium	Low	High
José	Male	16	Medium	Low	High
Rania	Female	16	High	High	High
Luisa	Female	16	High	High	High
Diana	Female	16	High	High	High
Camila	Female	16	Medium	Low	Low
Javiera	Female	17	Medium	Low	Low
Pedro	Male	16	High	High	Low
María	Female	16	High	High	Low

RESULTS

Quantitative Results

Descriptive Statistics

Table 2 presents the means and standard deviations for the SARA dimensions (academic print, academic digital, recreational print, and recreational digital), the QESE reading component, and the reading PET.

The lowest means were found in the academic digital (*M* = 4.16; *SD* = 1) and the academic print (*M* = 4.25; *SD* = .94) components. Higher means were observed for the recreational print (*M* = 4.67; *SD* = 1,03) and recreational digital (*M* = 4.81; *SD* = 1,05) components. Students displayed more positive attitudes towards the recreational components of reading attitudes, rather than the academic ones. This is confirmed by the percentage of positive responses to items in the recreational print component ("How do you feel about getting a book or a magazine in English for a present?" with 87%) and the recreational digital component ("How do you feel about using social media in English in your free time?" with 89%).

The RSE scores displayed a moderately high mean (*M* = 5.18; *SD* = 1.14). The item with the highest percentage of positive perceptions was found in the item: "Can you read short English narratives?" (78%). Finally, results for the proficiency test revealed that learners displayed an average A2 level (*M* = 21.19; *SD* = 7.35).

Inferential Statistics

The data for all relevant components were tested for normality. Although kurtosis and skewness values suggested normality, the Shapiro-Wilk normality test was significant in all the measures but the academic digital component. We then conducted both Pearson's *r* and Spearman's *rho* correlations with the data, with the results being nearly identical regarding significance values and correlation strength. Thus, we kept Pearson's *r* results to identify relationships between the SARA components, RSE, and reading proficiency (Table 3). The interpretation of the correlation coefficients was done following Oswald and Plonsky's (2010) guidelines, with $r = 0.25$ signifying a low correlation, $r = 0.40$ being a moderate correlation, and $r = 0.60$ indicating a high correlation.

Results revealed significant strong positive correlations between L2 reading RSE and all the L2 reading attitudes components. The highest of such correlations was found between L2 RSE and recreational print ($r = .715$; $p = .000$). A low but significant correlation was found between L2 reading proficiency and the recreational print component ($r = .193$; $p = .031$). Finally, a low but significant correlation was found between L2 RSE and L2 reading proficiency ($r = .266$; $p = .003$).

Qualitative Results

Four main themes were identified in the semi-structured interviews: Reading attitudes in the blended learning context; reading habits, reading attitudes and the teacher; reading

Table 2

Descriptive Statistics for SARA, QESE Reading Component, and Reading PET (n = 124)

Variable	Mean	SD
Academic print	4.25	.94
Academic digital	4.16	1
Recreational print	4.67	1.03
Recreational digital	4.81	1.05
Total SARA score	4.44	.88
QESE reading component	5.18	1.14
Reading PET	21.19	7.35

Table 3

Correlations between Reading Proficiency, Reading Attitudes, and Reading Self-efficacy

Variable	L2 RP	AP	AD	RP	RD	TRA	RSE
L2 RP	1						
AP	,093	1					
	,306						
AD	,097	,886*	1				
	,284	,000					
RP	,193*	,732*	,637*	1			
	,031	,000	,000				
RD	,174	,622*	,564*	,712*	1		
	,053	,000	,000	,000			
TSARA	,155	,934*	,894*	,882*	,790*	1	
	,085	,000	,000	,000	,000		
RSE	,266*	,613*	,656*	,715*	,655*	,749*	1
	,003	,000	,000	,000	,000	,000	

Note. L2 RP = L2 reading proficiency; AP = Academic Print; AD = Academic Digital; RP = Recreational Print; RD = Recreational Digital; TSARA = Total SARA; RSE = Reading Self-efficacy.

*. Correlation is significant at the 0.05 level (2-tailed).

attitudes; and reading self-efficacy. Overall, students enjoyed spending time reading from digital sources in the L2 such as social media, song lyrics and movies, and aspects such as teacher encouragement and the type of instruction approach were crucial in their development of L2 reading attitudes and reading self-efficacy.

Reading Attitudes in the Blended Learning Context

Participants perceived that online lessons were different from in-person classes and that they influenced their attitudes towards reading. According to the quantitative results, the academic digital reading dimension had the lowest scores in the survey. This might be attributed to the decreased interaction among peers, reduced class periods and reduced reading time in the L2. Rania referred to blended learning classes as follows:

> With the pandemic, we started online classes and my teachers had been changed. It was more difficult with the online classes. I felt that we didn't practice much. Sometimes the teacher started a conversation, and one could answer in English, but we lost that with online classes.

Rania considered that the online setting for learning was less favourable because the interaction with her teachers and peers was reduced. Therefore, opportunities for nurturing aspects such as general L2 reading proficiency was affected by the reduced socialisation among students during reading tasks. In addition, the adapted schedules and school timetables negatively impacted students' perceptions of blended learning classes. Rania also stated:

> With the pandemic, classes were reduced in length. We went from having six (face-to-face) hours a week, to having two. We didn't have the time to do much.

José expressed that in the blended context, academic reading had been mainly focused on reading texts on Google Forms, completing Google Forms activities, and taking online tests:

> I haven't read much on paper, I've read longer texts on the internet, and I've read the Google forms tests we've taken.

Diana displayed a negative view of reading the news in English as an academic task:

> Sometimes there are topics that I am not very interested in, and in the test, we always have to read texts like those and not all of them interest me.

In contrast, María stated:

> At school we always have to read pieces of news or articles that are important, and I have practiced with those.

José and Diana display high levels of reading proficiency, while María does not. Interestingly, these extracts suggest that academic activities involving reading were perceived as more useful for the learner who was less proficient, regardless of the medium of delivery.

Reading Habits

Students reported that reading at school in a pre-emergency remote teaching context consisted of engaging in reading activities involving textbooks and books. In a blended learning context, reading routines changed by having to read online news and short texts related to test-taking activities. Participants expressed that reading at school was mainly done to achieve academic goals, rather than recreational ones. For example, Ivania stated:

> To be honest I don't read for school. I mean, I only read the things I'm assigned… things like tests and activities.

Low reading proficiency learners perceive they are not avid readers, which is related to their reading comprehension skills:

> Ivania: "I like short texts, like those that have like three lines… I can read those, but in others tests I have read texts that are too long and that is difficult for me."
>
> Andrés: "I like short and simple texts to begin my reading and later, continue with more difficult things."

Participants stated that printed sources as extensive reading tasks were not typically part of the reading habits encouraged by their teachers:

> Rania: "We don't have (extensive reading activities) in the English class… We have the typical texts in preparation for tests. When we have tests, there's always a part that has a text."
>
> Andrés: "In class, we sometimes read the news or short tales, but mostly the news. It's what we usually do."

In contrast with students' paper-based reading habits, participants reported very positive views towards reading digital sources of information for fun:

> María: "I like reading song lyrics. For example, on Spotify I can read the lyrics there. I can also watch movies with subtitles."
>
> Camila: "I like reading movie reviews and I also like reading about old music. I think it's interesting. Most of the music I listen to is in English, so I like reading interviews with some of the bands I like… It's the same with movie reviews. The majority of critics that I like are English speakers."

Reading Attitudes and the Teacher

Students' L2 reading instruction was a relevant topic which emerged from the interviews and had a major influence on their perceptions of L2 reading attitudes and L2 reading self-efficacy. Consequently, students' perspectives of their own L2 reading attitudes and L2 reading self-efficacy are highly influenced by teacher methodologies in face-to-face and blended learning contexts, and could result in positive or negative perceptions. Teacher encouragement in general EFL tasks helped them to feel motivated and capable of improving their reading skills:

> Luisa: "Teachers have always helped us to improve or to like what we don't like. I have a good relationship with my English teachers and every time I have needed them, or If I haven't understood something (when I read), they have helped me to understand and improve."
>
> Javiera: "I remember this time when I didn't have a group to work with, so I wrote a piece of news about my favourite music band and read it out loud for my teacher. He awarded me a great grade and congratulated me. He told me that I had done a great job and that my pronunciation had improved a lot. I felt motivated."

Pedro mentioned that he felt confident and capable of reading in English based on the techniques his teachers had adopted in the past:

> When I was in 9th grade, my teacher made us sing during classes, so we didn't feel afraid of talking or reading out loud in front of our classmates, nor feel nervous.

Reading Attitudes and Reading Self-Efficacy

Students reported that their sense of competence in reading tasks (L2 RSE) was influenced by their peers' abilities and how they perceived themselves when comparing their proficiency. The following extracts suggest that when participants were able to perform a reading task successfully, but their peers could not, they felt highly capable of reading in English. Rania stated:

I trust myself. I have compared myself with my surroundings ... I don't know if that's good, but I think that based on that I feel talented. I know I can understand English.

In line with this, Luisa reported a low sense of self-efficacy when her peers achieved successful task completion:

> Well, sometimes when I am with coursemates that have better grades than I, I may feel less capable. It's just certain things that make me feel less capable, for example when I am next to really proficient people.
>
> Similarly, María expressed that her efficacy beliefs have changed positively through her years at school and that she realised this by contrasting her performance with their peers:
>
> Before, it was harder... I felt that I was at a lower level compared to my classmates because they had a good base of English and I had nothing, so it was like: Oh no! I would have liked to have that level. At that time, I felt less capable.

Participants perceived that there was a relationship between how capable they felt in reading a text in English and the feelings or emotions they experienced when reading a text:

> Javiera: "If I feel very capable of reading in English, I think my emotions aren't going to be of nervousness or anxiety. I am going to be calm because I know that I am going to do a good job."
>
> María: "Everything is related to how I feel, because if I feel confident about reading, I will understand what I'm reading better."

DISCUSSION

The research question put forward sought to assess how EFL learners' L2 reading attitudes and L2 reading self-efficacy beliefs were related to L2 reading proficiency in a blended learning context. Quantitative findings revealed that the L2 reading attitudes of the participants were moderately positive, with the recreational academic and recreational digital components displaying the highest mean scores. The high level of reading attitudes in the recreational components has been reported in the literature even with lower levels of proficiency (Park, 2020). Regarding L2 reading self-efficacy, the participants displayed overall positive beliefs towards reading, which have been associated with frequent use of reading strategies and better reading comprehension (Liao & Wang, 2018). For example, participants in this study displayed positive attitudes towards using a dictionary in the classroom (academic print) and looking for information online (academic digital) and thus may do better at performing reading tasks (Genç et al., 2016). As Bandura (1997) stated, successful completion of a previous task can influence self-efficacy. Regarding the correlations with the data, strong relationships between all the components of L2 reading attitude and L2 reading self-efficacy were identified. If a student perceives that a text is understandable and that reading will be successful (positive self-efficacy beliefs), reading attitudes are likely to be positive, and motivation will increase when reading the text. L2 reading attitude and L2 reading self-efficacy depend on each other, as a learner might first estimate their degree of self-efficacy in order to complete a reading task (Jang et al., 2015). The low but significant relationship between L2 reading self-efficacy and L2 reading proficiency found confirms to some extent previous findings suggesting that reading self-efficacy will tend to increase reading proficiency even in low proficiency readers (Liao & Wang, 2018; Mills et al., 2006). Finally, the weak relationship between L2 reading proficiency and the recreational print component of reading attitudes contrasts Lee and Schallert's (2014) results, who reported a strong relationship between reading achievement and reading attitude. In the present study, data from the SARA instrument showed that students were very positive about actions such as receiving a book or a magazine in English as a present. This also suggests that they would welcome activities involving paper-based texts in a blended school context.

Qualitative data further examined perceptions among participants and revealed that they perceived online lessons in a blended learning context as different from face-to-face classes and that this influenced their attitudes towards reading. The online setting for learning was less favourable because the interaction with teachers and peers was reduced. This is a common element in remote lessons. It can affect instruction, learning and the development of social and academic abilities (Dizon & Thanyawatpokin, 2021; Tang et al., 2020). The reduced number of face-to-face hours was a factor which impinged upon L2 reading during remote lessons in the selected context. Students reported reading pieces of news or articles for school and having mixed feelings towards them, which is related to Lee et al.'s (2015) notion that successful approaches to reading may depend on a learner´s language proficiency level. Furthermore, the mindset in relation to reading texts from coursebooks might have affected learners' perceptions of the importance of such activities in a blended learning setting. Indeed, these participants perceived that distance asynchronous learning was an additional activity that did not constitute learning itself. Fithriani and Alharbi (2021) assert that this is common in blended learning contexts, as two distinct communities are created: the community of face-to-face interaction and the online community. In this case, the online community was seen by participants as a space for the completion of activities and responding to tests, rather than a space for nurturing reading.

In terms of reading habits, these learners did not read books as part of an extensive reading program. Studies have suggested that when English resources are available to learners, they are likely to build positive attitudes towards L2 reading (Crawford, 2001; Ro & Chen, 2014). In the present study, the amount of academic reading done by students displaying high reading proficiency was insufficient. Students reported they typically had to read online news and short texts related to test-taking activities as part of online classes. In other words, the reading tasks in the blended learning setting were mainly done to achieve academic goals, rather than recreational ones. This may explain learners' perceptions towards the academic digital component, the lowest score in the survey. Regarding L2 paper-based recreational reading, most of the low proficiency readers reported that L2 recreational reading was not part of their habits since they found that it was difficult and less prominent in the curricula. School experiences can help increase self-efficacy in reading and in turn prompt learners to visualise future-oriented conceptions of themselves as readers that engage in such activities (Urdan & Pajares, 2006). In contrast, participants reported positive views towards digital recreational reading, which confirms the relevance of digital settings as an essential aspect of learning that is preferred by learners (Mckenna et al., 2012).

Finally, participants reported that teacher encouragement, whether academically or affectively, had a positive impact on how they perceived reading in a second language. Moreover, teacher encouragement and praise were fundamental aspects of reading self-efficacy among participants (Fathi & Soleimani, 2020; Lee & Schallert, 2014). Students also reported that their reading self-efficacy was negatively impacted when they witnessed their peers completing successful tasks. This somewhat contrasts with Bandura's (1997) vicarious experiences in self-efficacy, that is, with the idea that individuals believe they can complete a task once they observe their peers complete that task successfully. These participants felt they were more capable of reading in the L2 when they performed better than their peers, and felt less proficient when their peers outperformed them.

CONCLUSION

The purpose of the present mixed-methods study was to explore the relationship between L2 reading attitudes, L2 reading self-efficacy, and L2 reading proficiency of Chilean 11th grade EFL students in a blended learning context. It must be noted that the present study had limitations that were related to the Covid-19 pandemic. The study was carried out in one public high school, which prevented researchers from accessing students in other educational institutions. This would have yielded a more comprehensive view of the attitudes and perceptions of EFL learners in a blended learning context. Furthermore, due to the nature of the pandemic context, researchers were unable to administer an experimental treatment that could assess actual gains in reading attitudes, self-efficacy, or reading proficiency.

The impact upon the perceptions of learners of the learning environment and the type of instruction is a relevant aspect to be discussed from a pedagogical perspective in blended learning settings. It is essential for teachers to guide their students in the development of L2 reading self-efficacy by means of effective and consistent reading activities with increasing challenge, including synchronous and asynchronous learning. Findings revealed that most participants preferred to complete reading tasks in a recreational digital setting rather than an academic digital one. In other words, students held more positive views towards reading in a remote setting when it was for fun rather than for academic goals. Teachers should incorporate academic reading activities that are more engaging and contextualised to students' age, preferences, and realities to effectively use the synchronous and asynchronous time at their disposal in blended settings. Teachers should also be aware of learners who struggle with extensive reading tasks and focus on increasing their motivation. Emotional and motivational support can improve learners' perceptions of what they can do with reading tasks in different modalities and for different purposes. Educators who recognise the impact of reading attitudes on reading behaviours and reading proficiency are likely to adopt more flexible approaches when encouraging their students to read in blended learning settings.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHOR CONTRIBUTIONS

Marco Cancino: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Supervision, Validation, Writing – original draft, Writing – review & editing.

Nicol Gonzalez: Conceptualization, Investigation, Project administration, Resources, Writing – original draft.

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APENDIX A

SPANISH AND ENGLISH VERSION OF ADAPTED SURVEY OF ADOLESCENT READING ATTITUDES (SARA; McKenna et al. (2012).

1. ¿Cómo te sentirías al leer para el colegio noticias online en inglés?
1. How do you feel about reading news online for class?

2. ¿Cómo te sentirías al leer un libro en inglés en tu tiempo libre?
2. How do you feel about reading a book in your free time?

3. ¿Cómo te sentirías al hacer tareas para el colegio usando enciclopedias u otros libros impresos en inglés?
3. How do you feel about doing research using encyclopedias (or other books) for a class?

4. ¿Cómo te sentirías al chatear o enviar e-mails en inglés en tu tiempo libre?
4. How do you feel about texting or e-mailing friends in your free time?

5. ¿Cómo te sentirías al leer para el colegio textos online (por ejemplo en el computador) en inglés?
5. How do you feel about reading online for a class?

6. ¿Cómo te sentirías al leer textos en tu libro de inglés (texto de la clase de inglés)?
6. How do you feel about reading from textbook for your EFL class?

7. ¿Cómo te sentirías al hablar con un amigo/a sobre algo que has leído en inglés en tu tiempo libre?
7. How do you feel about talking with friends about something you've been reading in your free time?

8. ¿Cómo te sentirías si te regalan un libro o revista en inglés?
8. How do you feel about getting a book or a magazine for a present?

9. ¿Cómo te sentirías al chatear en inglés con tus amigos en tu tiempo libre?
9. How do you feel about texting friends in English in your free time?

10. ¿Cómo te sentirías al leer por diversión un libro en inglés un día domingo lluvioso?
10. How do you feel about reading a book for fun on a rainy Sunday?

11. ¿Cómo te sentirías al tener que hacer un proyecto/trabajo en inglés online con tus compañeros de clase?
11. How do you feel about working on an Internet project in English with classmates?

12. ¿Cómo te sentirías al leer una novela en inglés para el colegio?
12. How do you feel about reading a novel in English for class?

13. ¿Cómo te sentirías al leer un libro en inglés online (por ejemplo, en el computador) para el colegio?
13. How do you feel about reading a book in English online for a class?

14. ¿Cómo te sentirías al leer cualquier cosa impresa (libros, revistas, comics, etc.) en inglés en tu tiempo libre?
14. How do you feel about reading anything printed (books, magazines, comic books, etc.) in English in your free time?

15. ¿Cómo te sentirías al usar un diccionario en las clases de inglés?
15. How do you feel about using a dictionary for the English class?

16. ¿Cómo te sentirías al tener que buscar información en inglés online (por ejemplo, en el computador) para una clase?
16. How do you feel about looking up information online for a class?

17. ¿Cómo te sentirías al leer un diario o revista en inglés para el colegio?
17. How do you feel about reading a newspaper or amagazine for a class?

18. ¿Cómo te sentirías al usar redes sociales en inglés en tu tiempo libre?
18. How do you feel about being on social media websites in your free time?

APPENDIX B

SPANISH AND ENGLISH VERSION OF ADAPTED READING COMPONENT OF QUESTIONNAIRE FOR ENGLISH SELF-EFFICACY (QESE: Wang et al., 2014).

1. ¿Eres capaz de hacer una tarea por ti mismo (solo) cuando incluye lectura de textos en inglés?
1. Can you do homework alone when they include English texts?

2. Cuando lees en inglés, ¿eres capaz de adivinar el significado de palabras que no conoces?
2. When you read English articles, can you guess the meaning of unknown words?

3. ¿Eres capaz de entender noticias online escritas en inglés?
3. Can you understand the English news on the Internet?

4. ¿Eres capaz de leer y entender narraciones cortas en inglés?
4. Can you read short English narratives?

5. ¿Eres capaz de leer diarios en inglés?
5. Can you read English newspapers?

6. ¿Eres capaz de descubrir el significado de nuevas palabras usando un diccionario inglés-inglés?
6. Can you find out the meaning of new words by using English-English dictionaries?

7. ¿Eres capaz de entender artículos sobre la cultura chilena escritos en inglés?
7. Can you understand articles in English about Chilean culture?

8. ¿Eres capaz de entender material nuevo, escrito en inglés (por ejemplo, noticias auténticas de revistas), seleccionado por tu profesor de la asignatura?
8. Can you understand new reading materials (e.g news from the Times magazine) selected by your English instructor?

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Occasionalisms in Social Networks During the Pandemic

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ABSTRACT

Background: This study explores and analyses occasionalisms that were created by social network users during the COVID-19 pandemic. The theoretical framework of this research is based on observing the concepts of occasionalism, neologism and nonce word.

Purpose: To indicate occasionalisms in the Russian and English languages and compare them in terms of word-formation, frequencies, part of speech and meanings, thus making a contribution to the understanding of how occasionalisms emerge in these languages.

Method: A qualitative and quantitative content analyses are used for data collection. The sample is obtained from different social networks ('Facebook[1]', 'Twitter[2]', 'Reddit' and 'VK'). Results: Occasionalisms are created mostly through blending, compounding, and affixation. Mixed word-formation methods are also used. The most used parts of speech appear to be nouns and adjectives. The most Russian occasionalisms are ironic, expressive and attract attention, while English occasionalisms are not that expressive as they refer to medical or political concepts. Borrowings from English in the Russian occasionalisms are also indicated. The glossary of 106 occasionalisms in the Russian and English languages is introduced at the end of the study.

Conclusion: The results might expand the knowledge of new vocabulary items in the field of lexicology and stylistics, and have practical implications in language teaching and translations, as occasionalisms may frequently create obstacles for foreign language students and translators. They also may serve as a basis for further studies on neologisms, occasionalisms and nonce words generated during the pandemic and cover the gap in comparative studies of the Russian and English occasionalisms. In addition, the obtained results might be beneficial for future research in sociolinguistics and sociocultural linguistics providing greater awareness of the linguistic and sociocultural factors that impact the adoption and use of occasionalisms in both languages.

KEYWORDS

occasionalisms, COVID-19 pandemic, nonce words, word-formation, social nets, language of the internet, word coinage

INTRODUCTION

It is widely recognised that society is going through an unending cycle of changes, affecting the language that reflects human reality. The language is dynamic and reflects human reality being constantly affected by changes in society. Therefore, not only the phonetic system is modified, but also morphological structures are transformed. The most vivid changes are traced in the vocabulary. The dynamics of language can be observed through appearing words (Arndt-Lappe, Braun, Moulin, & Winter-Froemel; Vdovichenko & Kudritskaya, 2020). People coin new nominations and phrases in order to describe emerging concepts, their feelings or emotions in response to surrounding changes. Major changes in the vocabulary happen during significant socio-political events (Arnold, 2011). People share their coinages on the Internet and social networks, which give potential for extending vocabulary as new words and phrases are created every day around the world. Internet users coin new nominations for several reasons: to

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1 Has been banned in the Russian Federation.
2 Has been banned in the Russian Federation.

denote a concept; to make a joke, to appear ingenious, or to express their feelings through a new lexical unit (Goel et al., 2016; Rúa, 2010). Moreover, globalization is another factor that has also contributed to the development of new lexicon to define evolving technologies, products, and lifestyles. For example, English words such as *hashtag*, *selfie,* and *smartphone* have become part of the global vocabulary due to their relation to social media and technology (Katamba, 2005). Thus, there are a number of factors which provoke the emergence of new words and facilitate the evolution of the language.

Social networks have become one of the main platforms where people could share their opinions and thoughts during the COVID-19 pandemic. People started to communicate online due to the danger of the spread of the virus. The pandemic has led not only to the global changes in medicine, education, politics and society, but also to the outburst of new words (Egorova, Krasheninnikova & Krasheninnikova, 2021). People had to define new concepts, things, and phenomena that they encountered. It was necessary to share their fears and concerns during anxious and disturbing circumstances. Orel and Vasek (2021) claim that social networks are 'the major drivers of the production' of new words. 'A new lexical world to explore' has been opened to linguists due to the pandemic[3]. According to Thorne (as cited in Moran, 2020)[4], thousands of new words have been created over the last two years, which provided ample opportunity for linguistic research. For example, Twitter[5] users are 'the most active, flexible, and ingenious language creators' (Orel & Vasik, 2021). However, these Twitter[6] users might use other platforms and coin new words there respectively.

Scholars still debate the topic of defining a new word that was coined. Feldman (1957) was the first linguist who used the term '*occasionalism*'. According to Ahmad (2000), *occasionalism* refers to 'a linguistic form which a speaker consciously invents or accidentally does on a single occasion'. However, other researchers use the term '*nonce word*' or '*nonce formation*' (Crystal, 2008). There are also scholars who 'combine this concept in a broad way under the term "*neologism*"'. The first part of the paper 'The notion of occasionalism, nonce word and neologism**'** explores the distinction between these terms.

Some linguistic studies addressed the issue of new lexical units which emerged during the COVID-19 pandemic. Most of them produce evidence that a lot of new English and Russian words and phrases have been created due to the pandemic. Nevertheless, previous research focused on one language instead of comparing occasionalisms in different languages. There is value in extending the present research to examine the difference in Russian and English occasionalisms in the discourse of social networks. Comparing occasionalisms in these two languages within the context of COVID-19 may highlight peculiarities of word formation processes, and demonstrate how Russian speaking and English-speaking users of social networks reacted to the pandemic through the linguistic means.

This study aims to investigate occasionalisms in the Russian and English languages that were coined during the COVID-19 pandemic in social networks and compares them in terms of frequency, parts of speech, word-formation processes, and meanings.

Specifically, the study focuses on the following research questions:

RQ1: What English and Russian occasionalisms appeared during the COVID-19 pandemic?

RQ2: What are their meanings, parts of speech and word-formation processes?

RQ3: How can English occasionalisms be compared to Russian ones?

RQ4: Are there equivalents of English occasionalisms in the Russian language?

In addition, the novelty of this paper stems from the lack of research on new words, particularly occasionalisms, which were coined in various social networks in both Russian and English languages during the COVID-19 outbreak. In this study, comparative analysis is conducted in order to indicate differences in occasionalisms in these languages.

Respectively, the following research hypotheses were formulated:

H1: The most common part of speech is a noun. New words which are created are frequently nouns as new objects are usually denoted.

H2: There are no significant differences in English and Russian occasionalisms due to globalisation and the development of the Internet which leads to word borrowing.

[3] Crystal, D. (2020). *Covocabulary: Fifteeneightyfour.* Cambridge University Press. http://www.cambridgeblog.org/2020/05/covocabulary/

[4] Moran, P. (2020). *1.Covidiots? Quarantinis? Linguist explains how COVID-19 has infected our language*. CBC. https://www.cbc.ca/radio/thecurrent/the-current-for-april-22-2020-1.5540906/covidiots-quarantinis-lin-guist-explains-how-covid-19-has-infected-our-language-1.5540914

[5] Has been banned in the Russian Federation.

[6] Has been banned in the Russian Federation.

H3: Most coined occasionalisms express the author's emotion or attitude to the denoted referent.

LITERATURE REVIEW

The Notion of Occasionalism, Nonce Word and Neologism

This study relates to the research area that explores the coinage of new words. For decades, linguists have attempted to define the concept of new words that appear in the language. These works suggest different terms in both Russian and English languages, particularly *'occasionalism' ("occasional word"), "neologism"* and *"nonce word"*.

The term "*occasionalism"* was first suggested by Russian scholar, Feldman (1957), who focused on the analysis of occasional words that were coined by Russian writers and poets. Occasionalisms have an inseparable connection with context. However, that connection with context prevents occasionalisms from becoming a part of the language (p. 65). Hence, it is necessary to distinguish occasionalisms and neologisms, as the latter are placed in dictionaries, while occasional words remain new ones (p. 66). According to Lopatin (1973), *neologisms* are "new words which usually stop being recognised as new ones, their originality disappears", while occasionalisms remain new formations and they are not used in people's speech on a daily basis. Neologisms appear in the language for several reasons (Kondrasheva & Tinina, 2019):

(1) Appearance of new reality, object or notion that is to be defined;

(2) Necessity to denote referents that already existed but did not have any designations;

(3) Appearance of one word denoting the concept instead of a word phrase;

(4) Necessity to highlight the transformation of a concept in the changing society;

(5) Influence of other cultures on the language.

These findings indicate that reasons for coining new words, both neologisms and occasionalisms, are identical. Thus, both terms can be regarded as parts of the same continuum and are closely interconnected since occasional words might transform into neologims over time having lost their novelty.

Previous studies observed occasionalisms in literature as there was no possibility to find them on the Internet. According to Feldman (1957), the most frequent usage of occasionalisms in the Russian literature is observed in the works by Mayakovsky, e.g., поцекистей *(potsekisteii),* and Saltykov-Shchedrin, e.g., душедрянствовать *(dushedryanstvovat')*. In terms of world literature, occasionalisms are widely used in German and Japanese literature. The study proposes that even though occasionalisms have their own author, some of them might be created by multiple people simultaneously and left unnoticed (p. 65). However, occasionalisms are generally viewed as "individual or authorial'' (Vdovichenko & Kudritskaya, 2020). An author usually shows their interpretation of an existing view of the world through creating an occasionalism.

A Russian linguist, Lopatin, (1973) defines occasionalism, which comes from Latin "*occasio"* meaning "*occasion"*, as a word that was created once, on an occasion (p. 63). Occasionalisms tend to be expressive, full of meaning and emotion, but they do not come into common use (p.65). For instance, the Russian poet Mayakovsky created occasionalisms with the intention to make his poetry more aesthetic. He did not want to add new words and contribute to the Russian vocabulary (Vinokur, 1943, p. 31, as cited in Lopatin, 1973, p. 65). Another reason for creating occassionalisms is suggested by Terry (2021). The author assumes that occasionalisms are coined to add humour to a spontaneous conversation. Occasional words might be created everywhere, e.g., in everyday speech, works of fiction, publicistic texts (p. 69). They remain occasional, while neologisms become generally accepted by speakers (Pahomova, 2013, p. 80). Nevertheless, some people consider both terms as interchangeable.

Furthermore, the term *'nonce word'* was suggested by a British linguist Crystal (2008). Nonce word is defined as the lexical unit that "a speaker consciously invents or accidentally uses on a single occasion" (Crystal, 2008, p. 329). In contrast, a nonce word or a formation which has been accepted and used in the language transforms into a neologism. Poix (2018) refers to *'nonce formation'* as the process of coinage and '*occasionalism*' as a result of this process. Nykytchenko (2015) affirms that nonce words are complex for both comprehension and translation (p. 37). Authors put their meaning into a word which makes it difficult to both understand and translate. The study proposes that nonce words will henceforth be referred to as occasionalisms, meaning "author's word formations designed to convey expression, as a rule, in fiction" (p. 38). Taken together, these findings highlight that two notions, occasionalism and nonce words, are completely identical.

Debate still exists regarding the exact definition for the phenomenon of creating new words. There is little agreement on the term that should be used in referring to emerging words that are created by authors. This research follows Lopatin's (1973) definition of occasionalism, as it is accurate. The terms "occasionalism" or "occasional word" shall be used in this paper, designating new words that were created in order to make the text or situation more humorous, ironic, or expressive. Occasional words are not included in dictionaries. Therefore, previous studies on occasional words have left several questions unanswered. Despite the definitions that are given in these works, it remains largely unclear what is the generally accepted criterion that would indicate the difference between neologisms, nonce words and occasionalisms.

Features of Occasionalisms

The question of identification of new formations in modern linguistics still causes a lot of disagreement (Egoshina, 2007). Some use the term "neologism", others refer to "nonce word" or "occasionalism". Hence, characteristics of occasionalisms were introduced by scholars. Apart from that, criteria of differentiating between neologism and occasionalism were elaborated.

Two functions of occasionalisms are described by Poix (2017), who explored neology in children's literature:

(1) Hypostatization (making a fictional object real). Occasionalisms are useful when it is necessary to name animals, e.g., *wargs*, vegetables, e.g., *snozzcumber*, or people, e.g., *Muggles*. This function is considered as a primary one in the fantastic world of children's literature. The context (an illustration or text) should be provided for the reader to understand the concept.

(2) Attention-seeking devices (foregrounding occasional formations). Children might not be able to detect occasionalisms as they are too opaque. It is important to highlight them by making them lengthy as they would "automatically stand out as attention-seeking devices" (p. 9). Research on functions of occasionalisms is seriously limited to children's literature, having little reference to other occasionalisms, especially those which appear on social networks.

Two features of occasionalisms were revealed in a study by Alieva (2016): expressiveness and uniqueness. These two characteristics indicate occasionalisms as a group of words, showing their essence and purpose in the linguistic environment. Occasionalisms are "unexpected and unpredictable" for those who perceive the text (p.35). Expressiveness is connected to the expression of various emotions, e.g., irritation, reproach, anger, indignation, joy and fun. For instance, authors use occasionalisms to make their statements more expressive and original, increasing readers' interest: 'It was all going to be so simple, if only it could be, so many if *only's*' (Fowles, 1980).

Occasionalisms are clearly new words that are created in a specific situation (Vdovichenko & Kudritskaya, 2020). For example, the word трампоапокалипсис was created by Russian journalists to describe problems that arose in connection with the election of Donald Trump to the president of the United States in 2016 (Yudina, 2020). Babenko (1997) distinguished three degrees of occasionality: 1) standard potential words; 2) partly non-standard formations; 3) non-standard formations. It is also emphasised that interpreting words with second and third degrees of occasionality might cause difficulties. This is crucial because we might indicate occasionalism by the complexity of translating it, while neologisms already have translations into different languages.

Belova (2009) concluded that there are eleven main criteria for the delineation of occasionalism and neologism according to Feldman (1957). Four of them are pointed out as the main ones in the article:

(1) Affiliation of a word to the language or speech.

A neologism is 'a fact of system of the language' (Feldman, 1957, p. 64), e.g., *defriend*, *captcha*, *MOOC* (Liu & Liu, 2014), while an occasionalism is 'a fact of speech that has not entered into the language' (Hanpira, 1966).

(2) Derivational productivity.

Occasionalisms are created through word-formation. In contrast, neologisms mostly might appear through borrowing from different languages, e.g., бренд.

(3) Accordance with the system of language.

Some processes of coining occasional words are beyond any rules of the language, e.g., кое-какность.

(4) Dependence on the context.

Occasionalisms are bound to a particular context and are often unclear outside it. For instance, the whole Lewis Caroll's poem 'Jabberwocky' consists of occasionalisms, meanings of which are impossible to understand separately:

'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe:
All mimsy were the borogoves,
And the mome raths outgrabe.'

Mattiello (2017) also confirms the principal role of the context in the interpretation of occasionalisms, while for other new word-formations such as analogies its importance is less essential.

Recognizing new words demands certain skills and knowledge. Katamba (2005) claims that speakers need to be aware of the word structures to be able to generate and understand words. In particular he is putting forward the idea of the importance of two types of morphological knowledge: 1) the ability to analyse words and define their meanings by determining the various elements related to each other; and 2) the ability to define the meaning by recognising standard work-construction rules of the language employed (p.7).

While neologisms, as facts of the language, are not attached to the context, the meanings of occasionalisms should be observed in the context, e.g., законьячиваться (Aksenov, as cited in Belova, 2009; Cain et al., 2004) means to become browner, which is clear from the context. Deciphering the meaning without context would be unsuccessful. Context also contributes to incidental acquisition of nonce words (Reynolds. 2020). In addition, Lykov (1976) affirms that neologisms might be used separately from the context, while occasionalisms are attached to the context or a speech (p. 19). Although scholars attempt to implement machine tools in order to translate occasionalisms (Colb, Dressler & Mattiello, 2023), this trend still needs more time and research to develop. These results highlight the importance of following the criteria during the process of finding occasionalisms in the practical part.

According to Kuharenko (2011), occasionalisms are coined for communicative situations only, and they are not repeated beyond these occasions. However, functional expendability coexists with the fact that different authors might use the same occasionalism. It is unlikely that the original author of an occasionalism can be found on social networks. Moreover, people who use occasionalisms might have heard them somewhere else, even in life.

These results suggest that there are different characteristics of occasionalisms. Some of them may be important in the process of separating occasionalisms from neologisms.

Ways of Word-Formation

Ample research has been done on the word-formation processes. According to Zemskaya (1992), occasionalisms appear in the language through three main ways:

(1) Word-formation derivation is defined as creating new words from existing morphemes, following existing rules. Most common ways are the following: a) suffixation; b) prefixation; c) prefix-suffixal; d) compounding; e) blending; f) conversion.

(2) Semantic derivation means creating a new meaning of an already existing word based on similarity of a new concept with the already known concept.

(3) Borrowing words from other languages or dialects, jargons, etc.

Zykova (p.70)[7] suggests to consider two ways used in the process of forming new words: word-derivation and word-composition. Word-derivation includes a) affixation, e.g., *googlers* and b) conversion, e.g., *It's not a who, it is a what*, while word-composition includes a) shortening, b) blending, e.g., *warbreaker*, c) acronymy, d) sound-interchange, e) onomatopoeia, f) back-formation and g) distinctive stress (p. 70-71). Mweri (2021) also pinpoints blending and acronymy as the most frequently used ways of generating new words during the Covid-19 pandemic. Blending or blends refers to the word-formation process which results in forming new words by blending existing ones: *camcorder* (*camera* + *recorder*), infomercial (*information* + *commercial*) (Akmajian et al., 2010, p. 28). Crystal (2011) also considers blending as one of the most common processes of word-formation. He points out that social media platforms have provided space for generating new blends such as *tweeps* (Twitter_peeps) and *Facebookery* (Facebook + trickery). Besides blending, Crystal (2011) stresses an important role of compounding as well as abbreviations in the emergence of new words. These processes have become frequent in informal communication, especially among younger generations, due to the widespread use of social media. Social networks appear to serve as a venue for the evolution of language and a new lexicon creation. Compounding is defined as the process of combining two or more words to create a new lexical unit. The meaning of a newly created word is usually related to the meaning of its constituents (*black* + *board* = *blackboard*). Abbreviation is considered as a shortened or contracted form of the word where syllables are represented by first letters of each constituent (*ITV - Independent Television*). Another way of word-formation - eponymy - was described by Pavlík (2017)[8] as creating new words by using proper names as common nouns, e.g., *guillotine, wellingtons, Stalinism.* Personal names, place names, fictional characters, and historical events or periods can serve as a source for eponymies' origin.

Ratih and Gusdian (2018) indicated other ways of word-formation in the modern English language: a) folk etymology, e.g., *pando* refers to *coronavirus pandemic* (Al-Salman & Haider, 2021); b) back-formation. Double word-formation processes were also found; c) folk etymology + compounding; d) compounding + affixation, e.g., *lockdowners* (ibid); e) blending + affixation, e.g., *covidpreneurs* (ibid.) and f) clipping + blending. Apart from these, Liu & Liu (2014) introduced the following classification of ways of word-formation that are used in social networks: a) compounding, b) blending, c) clipping and d) old words with new meaning. Clipping is described as a process of forming new words by shortening the existing ones: *professor - prof* (Akmajian et al., 2010, p. 581). There are three types of clipping that can be defined: front-clipping, when the beginning of a word is contracted (*telephone - phone*); middle-clipping, when the

[7] Zykova, I.V. (2008) A practical course in English lexicology (6th ed.). Academia.

[8] Pavlík, R. (2017). *A textbook of English Lexicology I. Word structure, word-formation, word meaning*. Z-F Lingua.

middle of the word is clipped (*market - mart*); and back-clipping, when the end of a word is cut (*doctor - doc*). Khromyh (2016) distinguished other word-formation processes: a) abbreviation, e.g., *O.W.L.* meaning *Ordinary Wizarding Levels* (Skrylnik, 2017); b) onomatopoeia, e.g., *mwahaha*; c) changing of sounds, e.g., *wunk, smole* (p. 190).

As for the Russian language, Eismann (2015) defines three main factors which might influence word-formation processes. First, he points out individual innovation which is involved in creating new words and revitalising old ones. The second factor which contributes to the emergence of new words is cultural context. The scholar explains that new words might be coined in response to historical events and specifical cultural occasions (like COVID - 19). Eismann (2015) adds that linguistic structures also play a crucial role in word-formation in the Russian language. The author emphasises how morphology, syntax, and semantics all contribute to the coinage of new words.

Although the findings are important, not every word-formation process mentioned is appropriate for occasionalisms. Changing punctuation alters the meaning of the whole phrase, while occasionalism refers to a word that was coined on a single occasion. Apart from this, word-formation processes in occasionalisms connected to the pandemic have been barely examined in previous studies.

METHOD

Design

The goal of this study is to explore occasionalisms in the Russian and English languages that were coined during the COVID-19 pandemic in social networks and compare them in terms of frequency, parts of speech, word-formation processes, and meanings. With this aim in mind, both qualitative and quantitative methods were used. Content analysis combines both types of methods for analysing large volumes of textual data. Social networks were used as a source for linguistic material for the analysis since they reflect all the transformations of the language, tracing the history of these changes. People use social media in order to be recognised and receive attention in different situations, especially in disturbing ones. Social networks are not only a platform for sharing personal lives, but also a place for sharing opinions, thoughts, and feelings. A living language can be explored through social networks. People coin new words so that their posts would be more ironic and expressive. Hence, social networks have become the source of retrieving data for this research. One of the characteristics of occasionalisms is the dependence on the context (Belova, 2009) and it might be difficult to understand the meaning of a new word without context. Social networks provide an opportunity to find occasionalisms and observe them in the context.

Instruments

Online Dictionary Merriam-Webster

Occasionalisms usually do not compile dictionaries (Feldman, 1957). Therefore, words found in social networks were checked whether they were listed in the online dictionary, Meriam-Webster[9]. If not, they were considered as occasionalisms.

Social Searcher Engine

The Social Searcher engine allows us to monitor all the mentions in social networks and calculate their frequencies. This study utilises the engine in order to observe all the mentions of the words found and how frequently they were used.

Procedure

Social networks, such as Facebook[10] (deemed extremist in the territory of the Russian Federation), Twitter[11], VK[12] and Reddit[13] were selected in order to collect the sample for the research. The sample was collected manually from users' posts from March 1, 2020, to December 31, 2021. The size of the sample was 8,462 users' posts. The large time frame was selected with the aim of gathering the newest occasionalisms. The users' posts were found through hashtags and keywords related to the pandemic, e.g., #COVID19, #coronavirus, #pandemic, #corona which were widely used to tag the messages on the chosen topic. Internet users communicated their opinions and feelings in their posts. Such posts might have contained users' expression towards the pandemic through a variety of linguistic means including word-formation. After this, the collected posts were observed for gathering occasionalisms which were used by users. Therefore, the words found were checked in the online dictionary, Meriam-Webster.

In the second phase, semantic and morphological analysis was conducted in order to indicate the meanings, parts of speech and word-formation processes. Grounded in the studies by Feldman (1957), Babenko (1997) and Belova

[9] *Merriam-Webster.com*. Retrieved January 24, 2022, from https://www.merriam-webster.com/

[10] *Facebook*. (2022). Facebook. Retrieved February 5, 2022, from https://www.facebook.com/ (The access is restricted in the Russian Federation)

[11] *Twitter.* (2022). Twitter. Retrieved January 20, 2022, from https://twitter.com/ (The access is restricted in the Russian Federation)

[12] *VK*. (2022). VK. Retrieved March 25, 2022, from http://vk.com/

[13] *Reddit*. (2022). Reddit. https://www.reddit.com/

(2009), context is important in defining the meanings of occasionalisms. Thus, the context was examined during the process of indicating meanings. Frequencies of the words found were calculated through the Social Searcher engine.

In the final phase, a glossary of English and Russian occasionalisms was created, which included meanings, frequencies, parts of speech and word-formation processes, based partly on studies by Zemskaya (1992), Liu & Liu (2014), Khromyh (2016), Skrylnik, (2017), Ratih & Gusdian (2018).

The choice of social networks as a source for the linguistic material for the analysis helped to discover and compare English and Russian occasionalisms in the context in which they emerged, facilitating their translation. Morphological analysis aided in exploring word-formation processes and decoding meanings of occasionalisms, thus establishing the reasons for their generation. Calculating the frequency of use was aimed at defining the most widely generated part of speech and confirming or refuting HO1. Systematization of occasionalisms in a table demonstrated the dimensions that served for analyzing both English and Russian new lexical units. A comparative analysis was further conducted against these dimensions to answer research questions and substantiate the hypotheses. The sample of 8,462 enhanced the validity of the obtained results, though subjectivity could not be avoided completely since the authors interpreted the meanings of the occasionalisms themselves. The context mitigated the risk of biased interpretation but might not have entirely excluded it. Nevertheless, tracking frequency use and analyzing occasionalisms in context ensure minimal bias.

RESULTS

The purpose of this research is to explore occasional words and phrases that were created due to the COVID-19 pandemic. The glossary of 106 English and Russian occasionalisms has been compiled based on the found occasionalisms.

Occasionalisms in the English Language

The vital role of context (Feldman, 1957; Babenko, 1997; Belova 2009) in analysing occasionalisms has been proved. It is obvious what *covidiot* means, but when it comes to such occasionalisms as *covidocious*, it becomes difficult to guess its meaning. The context is important while decoding most of occasional words: “So… my doctor awarded me this cute mug. She coined the word “Covidocious,” meaning someone who has survived Covid.” Some of users indicate the meaning of occasionalisms in their posts. However, in some cases the explanation is missing:

> “I’ve got the Rona again”.

By the context, it might be guessed that *the Rona* means coronavirus, but is called as if it is a person. *The Pandy* is also used when referring to the pandemic. Hence, occasionalisms require context in order to be decoded by other people. Next, *coronic* means being infected by COVID-19. The word-formation process is an adjective-forming affixation: *coron-* + *-ic.* Some words mean desperate situation, panic during the pandemic: *coronapocalypse* and *coronageddon*. By creating such words, users try to convey their feelings and emotions about an upheaval, which corresponds to HO3:

> “Now we’re in Coronageddon, I’m frequently on multi-hour video calls”.

The way of formation of this word is blending: coronavirus + Armageddon. Blending appears to be the most common way of word-formation: coronacation (coronavirus + vacation), covideos (covid + videos), coronallennial (coronavirus + millennial).

The word denoting occasionalisms during the pandemic was found in social networks: *coronaneologisms* (corona- + neologisms).

Next, most English occasionalisms which appeared in social networks are connected to some activities that have become unusual due to the new reality: *coviwedding* (wedding through a video call), *quarantinder* (searching for a partner on the dating app during the self-isolation), *quaranstream* (to stream music or videos during the self-isolation), *coronavacation* (having free time due to getting paid to be off work); covidivorce (a divorce after being together in one house for a long period during the self-isolation). Most of such words are created through blending as well: *covid* + *wedding, quarantine* + *tinder; quarantine* + *stream; coronavirus* + *vacation*.

In addition, some occasionalisms are found not to follow the patterns of having *-covid* or *-corona* morphemes: *rat-licker* is someone who catches or spreads disease, mainly intentionally. The word is created through compounding (*rat* + *lick*) + affixation *(-er*). *Upperwear* is the clothing that can be seen from the waist up during an online conference. Compounding is also used while creating the word (*upper* + *wear*).

Moreover, the focus on health is pointed out in occasionalisms, e.g., *coronainsomnia* (inability to sleep because of too much stress), *doomscrolling* (the activity of reading too much negative news which influences mental health). *Coronainsomnia* is created by compounding (*corona-* + *insomnia*) and *doomscrolling* is a result of compounding + affixation (*doom* + *scroll* + *-ing*). Table 1 illustrates the frequency of each word, definition, part of speech and word-formation processes that were used in creating the word in the English language.

Table 1
Glossary of English Occasionalisms

Word	Frequency	Meaning	Part of speech	Word-formation process
covidiot	643	a person who does not believe in the virus and endangers other people	noun	Blending
PPE	618	personal equipment aimed at minimising exposure to the virus	noun	Abbreviation
iso	616	short for isolation	noun	Clipping
N95	615	the type of a mask that is proved to be safer than the usual mask	noun	Eponym
QAnon	593	pro-Trump conspiracy theory claiming that that Donald Trump is working against a cabal of Satan comprised of his political opponents.	noun	Blending
anti-masker	545	a person who does not wear a mask	noun	Affixation
Qaren	506	a supporter of QAnon, especially a woman	noun	Eponym
covidism	495	irrational behaviour caused by the virus	noun	Affixation
doomscroll	468	to read too much negative news	verb	Compounding
doomscrolling	467	the activity of reading too much negative news	noun	Compounding + Affixation
quaranteen	444	people who were teenagers at the beginning of the out-break in March 2020	noun	Blending
zoom-bombing	443	the sudden appearance of relatives or pets during a video meeting on Zoom	noun	Compounding
infodemic	436	an excessive amount of misinformation	noun	Blending
coronials	422	generation that was born during the COVID-19 pandemic	noun	Blending
coronaphobia	408	the fear of catching the virus	noun	Affixation
quarantine shaming	390	someone who do not obey social distancing rules	noun	Repurposing + compounding
coronapocalypse	387	all the panic during the pandemic	noun	Blending
coronacation	381	having free time due to getting paid to be off of work	noun	Blending
covideos	350	videos that people watched during the isolation in order to have fun	noun	Blending
coronavacation	316	having free time due to getting paid to be off of work	noun	Compounding
quaranstream	310	to stream music or videos during the self-isolation	verb	Blending
the Rona	309	name for coronavirus as if it is a woman	noun	Clipping
rat-licker	305	someone who catch or spread disease	noun	Compounding + Affixation
coronic	291	infected by COVID-19	adjective	Affixation
coviddating	278	dating during the isolation	noun	Compounding
coronageddon	251	all the panic during the pandemic	noun	Blending
coronacoaster	214	unstable emotional state due to the pandemic	noun	Blending
the Pandy	205	name for pandemic as if it is a person	noun	Clipping
qultist	182	A cult like follower of the QAnon movement.	noun	Affixation
upperwear	156	the clothing that can be seen from the waist up during an online conference	noun	Compounding
covidivorce	146	a divorce after being together in one house for a long period during the isolation	noun	Compounding
coronacut	132	haircut that was done as an experiment as no one would see it during the isolation	noun	Compounding
quarantinder	109	to search for a partner on the dating app Tinder during the self-isolation	verb	Blending
isobeard	100	a beard that is grown during the isolation	noun	Blending

Word	Frequency	Meaning	Part of speech	Word-formation process
quarantrends	86	trends that were created during the pandemic	noun	Blending
coronainsomnia	86	the inability to sleep because of stress	noun	Compounding
covidocracy	58	the government which takes measures to fight with the virus but also considers people's opinion	noun	Affixation
coronawar	52	the process of fighting with the virus	noun	Compounding
covidicide	33	being in a crowd of people without personal safety gear	noun	Affixation
coviwedding	31	wedding during the pandemic (mostly through video calls)	noun	Blending
coronallennial	13	generation that was born during the COVID-19 pandemic	noun	Blending
coronaneologisms	11	new words that were created during the pandemic	noun	Clipping + compounding
covidocious	8	having just recovered from the COVID-19 virus	adjective	Affixation

Occasionalisms in the Russian Language

It should be noted that Russian occasionalisms turned out to be easier to find and indicate. They are expressive and ironic, immediately drawing attention to themselves. Moreover, they are more dependable on the context: взапертыш is not that easy to decode without additional information. It means a child that was born 9 months after the self-isolation. Собяусвайс is also difficult to understand.

> «Иногородние рассказали: даже заказав <u>*#собяусвайс*</u> заранее, они не попали в *метро. Карта* в пропуске есть, но не срабатывает».
>
> It is a digital pass introduced in Moscow during self-isolation. The word is formed through blending an eponym Собя- (proper noun Собянин, the surname of the mayor of Moscow) and a common noun аусвайс (an identification document that German authorities gave Soviet people during the occupation of Soviet Union during World War II aimed at identifying individuals from a Soviet background).

Irony is traced in the Russian occasionalisms: коровавирус, пирожок с ковидлом, вирусатор ходячий, уханькаться (get infected by COVID-19). The users of social networks tried to cope with such a situation through creating ironic words.

Authors used blending in order to mock people who disobey rules of self-isolation: барановирусник (баран + -о- + вирус + -ник), голоносик (голый + носик), ковигист (ковид + пофигист), голомордый (голый + морда + -ый). Overall panic was also highlighted by users: ковидбесие (ковид + беситься + -ие), трагиковидия (трагедия + ковид), гречкохайп (гречка + -о- + хайп), инфодемия (информация + пандемия), макаронавирус (макароны + вирус), маскобесье (маска + беситься + -ье). This proves the suggestion made by Eismann (2015) and Arnold (2011), who claimed that certain socio-cutural events coupled with a number of linguistic structures provoke generating new lexical units.

Activities during the pandemic were nominalized by the following occasionalisms: зумиться (to have Zoom calls), расхламинго (popular home activity connected to cleaning during the isolation), думскроллинг (reading too much negative news), удалёнка (distance format of studying or working). Notions defining people were created: карантье (a person renting a dog for self-isolation in order to go out), ковидник (a person who was infected with COVID-19), антителец (someone who has antibodies to the virus), ковидёнок (a child that was born during the quarantine), ковидаст (a person who neglects the danger of the virus), прививочник (someone who vaccinates), ковид-диссидент, коронаскептик (a person who denies the existence of the virus). Places acquired new names due to the pandemic: (ресторан) Карантино (a kitchen in the apartment during the period of the self-isolation), масочная (a place where one can get a mask), ковидарий (hospital for patients with COVID-19), наружа (outside the house), ковидор (the hall of the hospital where sick patients are held due to the lack of rooms), коронавал (a bunch of people wearing masks outside). Next, some other concepts were nominalized: карантини (an alcohol cocktail during an online conference), самоизолента (social network feed during the pandemic), карантэ (an ability of self-control), ковидопсихоз (health issues due to the isolation), социостанция (social distancing). Table 2 illustrates the frequency of each word, definition, part of speech and word-formation processes that were used in creating the word in the Russian language.

Comparative Analysis

Comparative analysis of examples of the Russian and English occasionalisms in terms of parts of speech, word-formation processes, and frequency has revealed that the number of the Russian occasionalisms found in the study exceeds English ones. However, the frequency of usage of English words is higher than the Russian ones. That might indicate that Russian words are more occasional as one of the characteristics of occasionalisms is low frequency (Lopatin, 1973).

Table 2

Glossary of Russian Occasionalisms

Word	Frequency	Meaning	Part of speech	Word-formation process
карантино	280	kitchen in the apartment during the period of self-isolation.	noun	Blending
ковидный	367	relevant to coronavirus	adjective	Affixation
удалёнка	262	distance format of studying or working	noun	Clipping + Affixation
пирожок с ковидлом	254	ironic form of calling the virus	noun phrase	Blending
ковикулы	241	period of official self-isolation in March-April 2020, officially declared as non-working days	noun	Blending
карантини	230	an alcohol cocktail during an online conference	noun	Blending
санитайзер	229	hand sanitiser	verb	Borrowing
думскроллинг	225	reading too much negative news	noun	Borrowing
ковид-диссидент	221	someone who denies the presence of coronavirus	noun	Compounding + Borrowing
антипрививочник	209	someone who is against coronavirus vaccinations	noun	Affixation
карантикулы	208	period of official self-isolation in March-April 2020, officially declared as non-working days	noun	Blending
ковидиот	204	someone who does not follow the rules of social distancing and spreads the virus	noun	Blending
наружа	197	everything that is beyond house	noun	Repurposing
масочная	190	a place where you can get a mask		Affixation
ковидарий	190	hospital for patients with COVID-19	noun	Blending
ковидарность	186	solidarity with people who are in self-isolation	noun	Blending
самоизолента	179	social network feed during the pandemic	noun	Blending + Affixation
короникулы	177	period of official self-isolation in March-April 2020, officially declared as non-working days	noun	Blending
полный ковидос	173	a phrase for describing the upheaval	noun phrase	Affixation
карантец	165	a phrase for describing the upheaval	noun	Blending
карантье	156	a person renting a dog for self-isolation	noun	Blending
ковидник	151	a person who was infected with covid-19 / a place where infectious people are kept	noun	Affixation
расхламинго	147	popular home activity connected to cleaning during the isolation	noun	Blending
постковидный	140	after COVID-19	adjective	Affixation
карантэ	132	an ability of self-control during the isolation	noun	Blending
зумиться	131	to communicate through Zoom	verb	Affixation
маскобесье	126	panic around masks and respirators, buying them in big quantities	noun	Blending
прививочник	126	someone who vaccinates	noun	Affixation
вируспруденция	124	the law connected to the pandemic	noun	Blending
коронавирье	123	a legend created during the pandemic	noun	Blending
гречкохайп	123	irrational panic around buying buckwheat	noun	Compounding + Borrowing
инфодемия	121	a huge flow of misinformation	noun	Blending
голомордый	120	someone who does not wear a mask in public	adjective	Blending + Affixation
коронаскептик	119	a person who denies the existence of the virus	noun	Clipping + Compounding

Word	Frequency	Meaning	Part of speech	Word-formation process
ковидопсихоз	119	health issues due to isolation	noun	Compounding
недокарантин	118	quarantine which is not that strict	noun	Affixation
антивакцинаторский	117	against vaccination	adjective	Affixation
антителец	117	someone who has antibodies to the virus	noun	Affixation
ковидёнок	114	a child that was born during the quarantine / diminutive form of coronavirus	noun	Affixation
коровавирус	112	ironic form of calling the virus	noun	Blending
ковидаст	110	someone who neglects the danger of the virus	noun	Affixation
коронапофигист	109	someone who neglects the danger of the virus	noun	Blending
ковидбесие	108	overall panic that was caused by the pandemic	noun	Compounding + Affixation
ковигист	106	someone who neglects the danger of the virus	noun	Blending + Clipping
макаронавирус	102	irrational panic around buying pasta	noun	Blending
уханькаться	100	to get infected by COVID-19	verb	Eponym + Affixation
ковидор	100	the hall of the hospital where sick patients are due to the lack of rooms	noun	Affixation
коронавал	100	a bunch of people with masks outside	noun	Blending
вирусовать	99	to spread the virus	verb	Affixation
барановирусник	99	someone who obeyed all the anti-epidemic measures	noun	Blending + Affixation
голоносик	83	someone who wears a mask at half-mast	noun	Blending
думскроллер	62	someone who reads too much negative news	noun	Borrowing
корониал	49	someone who born during quarantine	noun	Borrowing
вирусатор ходячий	46	ironic form of calling someone who spreads the virus	noun phrase	Affixation
собяусвайс	33	digital pass introduced in Moscow during the self-isolation	noun	Eponym + Blending
ковидироваться	14	cover news (political or social) for coronavirus news	verb	Affixation
социстанция	13	social distancing	noun	Blending
короналогизмы	4	new words that were created during the pandemic	noun	Blending
ковидоневроз	3	health issues due to isolation	noun	Compounding
взапертыш	2	a child that was born 9 months after self-isolation	noun	Affixation
ковидеоклуб	2	watching a movie through Zoom call	noun	Blending
ковидосвадьба	2	wedding that is celebrated on Zoom	noun	Compounding
трагиковидия	2	a phrase for describing the upheaval	noun	Blending + Affixation

They are expressive and attracting attention, while the English ones are not that original, most of them are repeated.

In terms of parts of speech, Russian occasionalisms constituted 51 nouns, 5 verbs, 4 adjectives and 3 noun phrases. At the same time, 38 nouns, 3 verbs and 2 adjectives were indicated among English nonce formations. Thus, H1 has been proved since nouns appear to be the most frequently generated part of speech and nominalize places, people and concepts.

Next, word-formation processes are different in Russian and English lexical units. Russian occasionalisms were created through the following ways of word-formation:

1. Blending (25)
2. Affixation (18)
3. Compounding (2)
4. Borrowing (4)
5. Blending + Affixation (4)
6. Compounding + Borrowing (2)
7. Blending + Clipping (1)

8. Clipping + compounding (1)
9. Compounding + Affixation (1)
10. Eponym + Blending (1)
11. Repurposing (1)

By contrast, English occasional words were coined by the following word-formation processes:

1. Blending (16)
2. Compounding (9)
3. Affixation (8)
4. Clipping (2)
5. Compounding + Affixation (2)
6. Eponym (2)
7. Abbreviation (1)
8. Clipping + compounding (1)
9. Repurposing + compounding (1)

Both Russian and English occasional words were mostly coined by blending which confirmed previous findings (Crystal, 2011). Other ways of word-formation are compounding and affixation (Liu & Liu, 2014; Al-Salman & Haider, 2021).

Another difference to be highlighted is the fact that English occasionalisms have higher numbers of frequencies (the highest is 643), while Russian nonce words are not that common (the highest is 367). The most common occasional words in English are *covidiot* (643), *PPE* (618), *iso* (616), *N95* (615), *QAnon* (593), while the most frequent occasionalisms in the Russian language are ковидный (367), Карантино (280), удалёнка (262), пирожок с ковидлом (254), ковикулы (241). This might be connected to the fact that English words are more common in general as there are a huge number of English speakers around the world.

Furthermore, there are borrowings in Russian occasionalisms from English: санитайзер – *sanitizer,* думскроллинг – *doomscrolling,* ковидиот – *covidiot,* инфодемия – *infodemic,* корониал – *coronial,* короналогизмы – *coronaneologisms.* This might also stem from globalisation processes which was reflected in H2.

DISCUSSION

The main purpose of this study was to indicate the English and Russian occasionalisms that appeared during the pandemic, their meanings, parts of speech and word-formation processes, and to determine if there are any similarities or differences and equivalents. Considering social networks as a focus of linguistic studies, VK, Facebook[14] (deemed extremist in the territory of the Russian Federation) and Twitter[15] might serve as great platforms for collecting data (Gabrielova & Maksimenko, 2021). Nevertheless, few occasionalisms were found in Reddit.

The findings of the study indicate that occasionalisms are generated mostly through blending, compounding, and affixation. Mixed word-formation methods are also used for generating new vocabulary. The most used parts of speech appear to be nouns and adjectives as it was expected. Comparative analysis of occassionalisms in both languages has shown that while the most Russian occasionalisms are ironic, evocative and attracting attention, English occasionalisms seem to be less expressive since they are related to medical or political concepts. The results obtained suggest that most of the nonce formations are coined for the following reasons: 1) appearance of new concepts; 2) influence of other cultures and languages; 3) creating of one word that substitutes a word phrase; 4) necessity to underline changes in politics, society and economics. The findings almost correspond to the previous research by Kondrasheva and Tinina (2019).

Moreover, the analysis of morphological, semantic, and word-formation processes has revealed that the Russian occasionalisms turned out to be more rare, expressive and ingenious, while the English occasional words seem to be connected to medical terms or political phenomena. Thus, HO3 has been partly confirmed by the Russian occasionalisms only. The reason might be linked to cultural differences and the authors' background, and their personal characteristics.

In summary, the findings of the current research demostrate that the language is developing at a fast pace every day, especially during crucial events and situations. The COVID-19 outbreak changed people's communication (Piller, 2020) and led to the appearance of thousands of new words that people had never known before. They had to describe new reality, objects and concepts that were appearing. Apart from that, people conveyed their feelings, from fear to joy, in the words that they created. Adding humor to conversations appeared to be one of the reasons for generating new words as was suggested by previous studies (Terry, 2021).

The analysis of newly formed lexemes in Russian and English have confirmed the previous research and demonstrated new findings. Previous studies have already observed some English occasionalisms that were identified in current research, e.g., *zoom-bombing, coronials, coronaphobia* (Al-Salman & Haider, 2021), *coronapocalypse, covidiot* (Orel & Vasik, 2021). *In addition, some Russian occasional words found in this study were already identified in prior research:* расхламинго, думскроллинг, ковидиот, карантье (Gekkina & Kozhevnikov, 2021). However, there were occasionalisms that were first identified in the present study, e.g., взапертыш, социстанция, трагиковидия.

[14] Has been banned in the Russian Federation

[15] Has been banned in the Russian Federation

Most of the occasionalisms point at the connection to the virus, e.g., короникулы*, covidicide*. However, there are those that do not have -*covid* or -*corona* morpheme, e.g., *rat-licker,* расхламинго. Apart from that, the number of English speakers seems to be higher, especially on the Internet. In addition, there are a lot of borrowings of English occasionalisms when creating Russian occasional formations, e.g., ковидиот – covidiot, which is also encouraged by globalisation processes and reflected in HO2. That might facilitate the process of translation of occasionalisms.

Limitations and Future Research Directions

An important limitation of defining new formations such as occasionalisms might reduce the level of objectivity of this study. Different points of view exist on defining the concept of new lexical units. The main characteristic of occasionalism is that they are not placed in dictionaries (Feldman, 1957). Moreover, it is difficult to say if they would be added to dictionaries in future. The complex situation with the restriction of social networks by the governmental institutions might also lead to limited findings. Identifying the geographical locations of those who created occasionalisms is impossible. The Internet allows people to stay anonymous, so most of them prefer to hide their locations. Another limitation pertains to the limited number of the examined word-formations and particular sources used for collecting occasionalisms. The study only assessed the occasionalisms found in Twitter[16], VK, Facebook[17] and Reddit, which may underestimate those formations generated in other social networks. Future research could make use of other social networks and occasionalims in other languages as well to assess the peculiarities of word-formation processes and occasionalisms through the prism of cultural differences. Since artificial intelligence is considered to be able to generate new words (Malkin et el., 2021), another direction for future research could be seen in exploring these new formations in comparison to those coined by humans.

CONCLUSION

The obtained findings will extend the knowledge of new lexical formations in the field of lexicology and stylistics. The results of this study suggest new insight in the current research on neologisms, occasionalisms and nonce words that were created during the pandemic as there is a lack of comparisons of the Russian and English occasionalisms. The findings support the idea of globalization which interferes into the word-formation process. At the same time, the assumption of expressing author's emotions and attitude through occasionalisms has been approved by Russian word-formations only. Therefore, the findings of this work might extend future research in sociolinguistics and sociocultural linguistics. Other occasionalisms from various media sources may be collected (TV channels, newspapers, YouTube channels, other social networks) in different languages in order to deepen the understanding of word-formation processes and cultural differences which impact these processes. Future works might observe whether these occasionalisms will be in common use as most of them are unlikely to remain in a permanent word stock. The topic of posts may be narrowed from COVID-19 to vaccination issues to analyse specific occasionalisms related to vaccination and anti-vaccination. The results might have important practical implications as a glossary of the Russian and English occasionalisms, which might assist people in learning definitions of unknown nonce words, is provided. Such words may also help dictionaries extend their thesaurus.

The question of defining occasionalisms and neologisms is still open. The issue of nonce formations is to be addressed. Apart from that, the Internet and social networks should be more explored as it is a great source of linguistic studies, reflecting a living language that has been constantly modified. Creating new words is like an art. People are able to build eloquent words that contain irony, panic, anger or fear. They share these coinages in social networks, letting other people embrace remarkable occasionalisms that might enter their vocabulary in future.

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None declared.

AUTHORS' CONTRIBUTION

Elena Gabrielova: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

Vitalia Lopatina: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

[16] Has been banned in the Russian Federation

[17] Has been banned in the Russian Federation

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Including the Sign Language Community in Language Research, Learning and Teaching: Video Reference Grammar of Slovenian Sign Language (SZJ)

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ABSTRACT

Background: Deaf users of Slovenian Sign Language vary in competence between L1, delayed L1 and L2. They follow the grammatical patterns of their language but are unaware of them because the language is neither linguistically documented nor systematically used in the classroom. As a result, the available learning and teaching materials are inadequately prepared in many aspects.

Purpose: The aim of this research was to create a reference grammar of SZJ by (i) using SZJ for metalinguistic descriptions and (ii) training Deaf signers as researchers and teachers. We observed their performance in order to answer the research question of whether it is possible to involve Deaf signers in the process of creating and disseminating a sign language reference grammar.

Method: Training a group of deaf L1 signers to (i) start systematic research of their language within a selected formal approach, (ii) create didactic video materials for learning/teaching Slovenian Sign Language as L1 and L2, and (iii) use these materials in language courses for L1 and L2 deaf signers.

Results: Eleven deaf L1 signers were trained as researchers in a 40-hour course. Five deaf and two hearing L1 signers were trained as language teachers in another 40-hour course and then presented the core concepts of Slovenian Sign Language grammar to 302 members of 12 local Slovenian deaf clubs in 24 editions of a 40-hour language course. For the presentations, they used didactic video materials (duration 5:46 hours). These materials were produced by the five L1 signers and later uploaded to two freely accessible online video platforms.

Conclusion: The approach proved fruitful: signers were actively involved in the creation and dissemination of the first Slovenian Sign Language reference grammar. The available analytics show that the materials are continuously viewed by both deaf and hearing users.

KEYWORDS

Slovenian Sign Language, minority language documentation, first/second language learning, first/second language teaching, sign language popularisation, reference grammar, ethics of working in deaf communities

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INTRODUCTION

In recent years, hearing majorities have recognised the need to acknowledge human rights for deaf communities, particularly in support of sign languages (De Meulder, 2018). Sign languages are insufficiently researched linguistically, especially sign languages with extremely small communities – which also applies to Slovenian Sign Language (*slovenski znakovni jezik*; hereafter SZJ), where only the most basic phenomena have been researched (Pavlič, 2015, 2016a,b, 2018). Although there is work that supports linguists theoretically and practically in the creation of reference grammars for sign languages (Quer et al, 2017) and the number of available reference grammars is slowly growing (Zeshan, 2000; Liddell, 2003; Johnston & Schembri, 2007; McKee, 2015; Branchini & Mantovan, 2020; Kelepir, 2020; Klomp & Pfau, 2020; Proske et al, 2020; Quer & Barberà, 2020;

Proske et al, 2020), sign language linguists from Deaf communities are still extremely rare, meaning that Deaf signers often contribute to such grammars as informants, but not as researchers. However, the most sustainable solution for any disadvantaged community is not to seek outside help (i.e. hearing L2 sign linguists), but to empower community members to take the initiative. In the field of sign languages, such an approach is not trivial, as Deaf communities lack the human resources to carry out the necessary research, summarise the results in a reference grammar and develop teaching and learning materials for their languages on this basis. Deaf communities often try to develop some teaching and learning materials (for SZJ see Podboršek & Moderndorfer, 1984; Podboršek, 1992; Podboršek & Kranjc, 2006; 2010, 2013, 2015; Podboršek, 2010, 2013a, 2013b, 2015; Kranjc et al, 2019, 2020, 2023a,b), but since they are usually not trained as linguists or supported by linguists, they naturally make mistakes and overgeneralisations and often cannot avoid being influenced by the oral language around them. The influence of an oral language is also due to the fact that the previous reference grammars (see above) were written in oral languages instead of being created with a sign language as a metalanguage. As far as I know, no attempt has yet been made to produce a comprehensive reference grammar entirely in the sign language described in the grammar.

This brief introduction and state of the art shows that there is a need not only to write a reference grammar for the under-researched sign languages, but also to use sign languages as a metalanguage and to involve the Deaf community in these processes. To fill this gap, we conducted the project *Handy video grammar of Slovenian Sign Language* (2018–2019), the aim of which was to (i) create a reference grammar of SZJ; use SZJ for metalinguistic descriptions in the grammar, (iii) train Deaf signers as SZJ researchers and teachers and (iv) disseminate the created grammar in the sign language community. In an 18-month project, SZJ signers participated in linguistic training and developed 49 video clips of the SZJ reference grammar, which were integrated into a 40-hour language course. In addition, one third of the entire population of deaf SZJ signers participated in at least one 40-hour language course conducted by the newly trained SZJ teachers. We recruited predominantly Deaf signers for collaborators in the project and observed their performance during the project to answer the research question of whether it is possible to involve Deaf signers in the process of creating a reference grammar to produce appropriate, effective and meaningful didactic materials and organise training for sign language teachers to make informed use of these materials in dissemination.

The remainder of this article is organised as follows. The literature review presents earlier reference grammars for sign languages and their meta-languages as well as previous descriptions of Slovenian Sign Language (SZJ) and existing SZJ teaching and learning materials. The methodology section explains the four phases of the project: Training of researchers, production of didactic materials, training of teachers and organisation of courses for deaf signers. The results are presented in the following section and discussed in the final section before the conclusion.

LITERATURE REVIEW

Sign Language Reference Grammars

Reference grammars contain descriptions of utterances of a language to document it. They employ an informal, user-friendly metalanguage so that every reader can access the language data independently of the theoretical framework while cross-linguistic comparability is ensured using standard terminology and analytical tools (Nikolaeva, 2015). Reference grammars are often used as teaching aid in various formal and informal educational settings. Historically, they tended to be prescriptive rather than descriptive and focused on lower-order thinking rather than conceptual insights (Berry, 2015). As a result, many language teachers and students still lack sufficient metalinguistic knowledge (Alderson & Hudson, 2013; Sangster et al., 2013). Some scholars have suggested that linking linguistic theory and L1 grammar teaching can solve the problem of limited conceptual understanding of grammar (Carter, 1982; Hudson, 2004), claiming that modern linguistic theory can be used to strengthen traditional grammar teaching. For example, the introduction of semantic roles and valency, which remain undiscussed in traditional grammar (Van Rijt et al., 2018), can be used to distinguish between obligatory and non-obligatory arguments in a sentence (Perini, 2015). Modern reference grammars, therefore, aim at an informed level of language description to make language interesting and meaningful for the reader.

Sign languages are natural human languages that emerge wherever deaf people are in sufficient numbers to form a linguistic community (for a historical overview, see McBurney, 2012). Although sign language research has made great strides worldwide in recent decades, compared to oral languages, most of the world’s sign languages remain poorly described or even completely undocumented. There are two main reasons for this: (i) sign language linguistics is a young field of research, and (ii) sign languages do not have a written form, which makes documentation particularly difficult. To overcome these problems, the COST SignGram Action *Unraveling the grammars of European sign languages: pathways to full citizenship of deaf signers and to the protection of their linguistic heritage* has developed the SignGram Blueprint (Quer et al., 2017), a handbook for writing a sign language grammar. It is an innovative guide that describes all components of sign languages comprehensively, systematically, and according to accepted linguistic standards. The work builds on the existing knowledge of descriptive linguistics and the findings of theoretical linguistics. It consists of two complementary parts: the list of grammatical phenomena (phonology, morphology, lexicon, syntax, and semantics) and the accompanying handbook with the relevant background information (definitions, methodological issues, examples, tests and references). Based on this work and as a spin-off project, the SIGN-HUB 2016-2020 was launched to create reference grammars for Catalan Sign Language (Quer & Barberà, 2020), German Sign Language (Proske et al., 2020), Italian Sign Language (Branchini & Mantovan, 2020), Sign Language of the Netherlands (Klomp & Pfau, 2020) and Turkish Sign Language (Kelepir, 2020). In addition to these, there are also a handful of older reference grammars, namely for American Sign Language (Liddell, 2003), Indo-Pakistani Sign Language (Zeshan, 2000), Australian Sign Language (Johnston & Schembri, 2007) and New Zealand Sign Language (McKee, 2015). Since this list is exhaustive, sign language reference grammars are evidently rare.

The Metalanguage

Although all existing sign language reference grammars come with illustrated examples of language use and are often supplemented by video resources, their metalanguage is either *spoken* English or the local *spoken* language (Zeshan, 2000; Liddell, 2003; Johnston & Schembri, 2007; McKee, 2015; Branchini & Mantovan, 2020; Kelepir, 2020; Klomp & Pfau, 2020; Proske et al., 2020; Quer & Barberà, 2020; Proske et al., 2020). As far as I know, no attempt has yet been made to create a comprehensive reference grammar entirely in the sign language described in the grammar. However, at least one multimedia platform channel provides content based on reference grammar to supplement lessons in vocabulary, grammar, culture, and history; one such channel is created by a certified American Sign Language teacher with a degree in sign language linguistics and teaching American Sign Language[1]. In contrast, most channels that offer sign language content focus on vocabulary, idioms, and/or culture rather than linguistics.

Describing Slovenian Sign Language (SZJ)

Slovenian Sign Language (slo. *Slovenski znakovni jezik*, SZJ) is a minority language of the deaf community in Slovenia. Despite using it in everyday communication, deaf signers master SZJ at different levels due to different ways of acquiring/learning the language. Only a small proportion of the signing population grows up in an environment that enables them to acquire SZJ without delay as their L1. Although it is recognised as an official language by the Act Regulating the Use of Slovenian Sign Language[2], SZJ is extremely endangered: it has a small number of users, it is not well documented linguistically, and it is not used systematically in the classroom. From the 1980s, informal SZJ research was conducted by members of the SZJ community. SZJ interpreters, special educators, teachers, and deaf signers who are actively engaged in the deaf community attempted to describe linguistic phenomena in SZJ, while a group of L1 deaf signers started developing a 'growing' online Slovenian-SZJ dictionary in 2003 and continued with their work to this date. In their pioneering efforts, these language enthusiasts were not supported by linguists; consequently, they naturally made errors and overgeneralisations and were unable to avoid being influenced by the surrounding oral language (Slovenian). In addition to diglossic language contact with the oral language, this encouraged both deaf and hearing L1 and L2 signers to resort to the rules of the grammar whose description they knew: Slovenian. As a result, a manually coded variety of SZJ/Slovenian emerged, namely Signed Slovenian. Because of its similarity to the more highly valued Slovenian language, this variety is paradoxically considered the more prestigious variety of SZJ and is often preferred in public discourse even by L1 SZJ deaf signers – which is not unusual in signing communities (see Rowley & Cormier, 2023 for British Sign Language). Until recently, much of the academic research on SZJ aimed at comparing SZJ and Slovenian from a spoken language perspective. Some works aimed at standardising SZJ (Bešter, 1994; Globačnik, 2001; Žele & Bauman, 2015), while others focused on Slovenian language literacy in deaf adolescents compared to their hearing peers (Kuplenik, 1999; Pfipfer, 2016). This research tended to be conducted without defined frameworks or vaguely based on the traditional structuralist language analysis used for Slovenian, using the same tools to describe SZJ. In the last decade, however, SZJ has received more linguistic attention. The Slovenian Research Agency funded a project to build a representative corpus of Slovenian Sign Language (Vintar et al., 2012; Vintar, 2015). The first steps towards a coherent reference grammar were taken by analysing the SZJ sign order in the formal framework of Generative Grammar (Pavlič, 2016a). In addition, selected phenomena, such as the linguistic use of space and agreement (Pavlič, 2015) and locative constructions (Pavlič, 2016b; 2018), have been described.

SZJ Teaching and Learning Materials

The lack of a reference grammar made it less likely that professional teaching and learning materials could be produced. Insufficient human resources lead to sporadic and unprofessional materials for teaching and learning SZJ as L1 or L2. After initial attempts (Podboršek & Moderndorfer, 1984; Podboršek, 1992), three textbooks (Podboršek & Kranjc, 2006; 2010; 2013; 2015) and corresponding picture dictionaries (Podboršek, 2010; 2013a; 2013b; 2015) have been published in recent decades, but they do not use SZJ as a metalanguage (which does not correspond to modern L1/L2 teaching); they do not meet the standards of the linguistic profession as they were not created by linguists (they often provide inadequate or contradictory descriptions without

[1] LearnHowtoSign (2023). https://www.youtube.com/@LearnHowtoSign (Accessed 9-11-2023).

[2] Act Regulating the Use of Slovenian Sign Language (2002). Official Gazette of the Republic of Slovenia 96(2).

reference to the data source); they do not deal with grammar but mostly present only vocabulary; they do not follow modern approaches to language teaching (real everyday situations and dialogues, attractive exercises, design). In all these respects, the new textbook series (Kranjc et al., 2019; 2020, 2023a,b) follows modern standards but has a very limited scope, as it is intended for students aged 6 to 8 in the first and second years of primary school education. Note that these textbooks are bilingual, as the same content is presented in both Slovenian and SZJ. The simultaneous learning of sign and spoken language is a 'legacy' of the total communication model (Mayer et al., 2016), but a clear distinction is made in these textbooks so that the approach does not create confusion but rather stimulates metalinguistic awareness within the lines of a modern approach called *Translanguaging* (Beres, 2015). The student books are also complemented by SZJ video materials and a teacher's book with linguistic explanations and pedagogical information for teachers.

METHOD

Background

Linguistic knowledge about many aspects of SZJ is inadequate; furthermore, due to the lack of theoretical foundations, there is also a lack of informational clarity in both the teaching and learning of SZJ as L1 and L2. The *Handy video grammar of Slovenian Sign Language* project (2018–2019) aimed to address this gap. It was led by the *Association of the Deaf and Hard of Hearing in Slovenia* and funded by the *European Social Fund* and the *Ministry of Culture of the Republic of Slovenia*. This section presents the participants, the materials, and the phases of the project. Our approach to language research, teaching, and learning was in line with the ethical principles of sign language research, particularly the Sign Language Communities' Terms of Reference Principles developed by Harris, Holmes, and Mertens (2009). Deaf signers were involved in every stage of the research project (as researchers, presenters, editors, and multimedia technicians) so that they could understand and influence the whole process to create relevant knowledge about their own language. It was important that a group rather than individuals were involved in this project to encourage interaction in grammar learning, which supports the development of their metalinguistic skills according to some approaches (Ribas et al., 2014). Active participants were recruited based on their integration into the deaf community (active membership in deaf clubs), experience in video production, or involvement in previous SZJ projects, such as the creation of the SZJ dictionary. They were paid for their participation. Both active and non-active participants gave their informed consent before being included in the project.

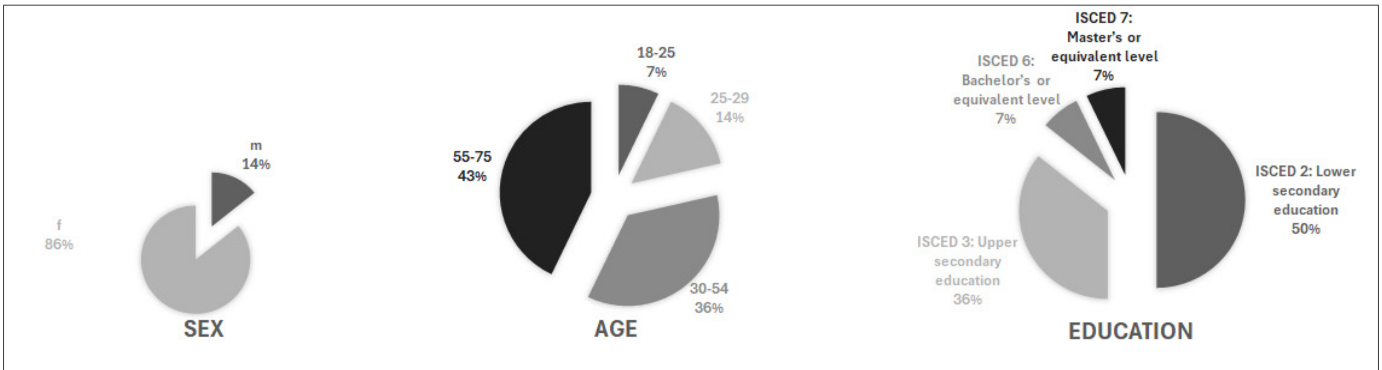
Table 1

Age Group and Educational Level according to the International Standard Classification of Education of Signers Who Participated in the Training for Researchers

Age group	N of signers	Education level	N of signers
18-25	1	ISCED 2: Lower secondary education	7
25-29	2	ISCED 3: Upper secondary education	5
30-54	5	ISCED 6: Bachelor's or equivalent level	1
55-75	6	ISCED 7: Master's or equivalent level	1

Figure 1

Sex, Age Group and Educational Level according to the International Standard Classification of Education of Signers Who Participated in the Training for Researchers



Participants

Eleven deaf and two hearing L1 signers (m=2, f=12) were included in the training of the language researchers; their demographic details are in Table 1.

Instruments

Participants in the language researcher training received basic background information on 40 selected topics about language structures and phenomena (Table 3).

Relevant terminology was suggested, and missing vocabulary was constantly identified and completed by the participants. A standardised experimental procedure, the Picture Description Task, was chosen as the predominant data collection method. It was developed by Volterra et al. (1984) specifically for sign languages. In addition to the Picture Description Task, two other procedures were used: the Repetition Task (informants repeat grammatical and ungrammatical utterances) and the Grammaticality Judgement Task (informants discuss grammatical and ungrammatical utterances of a language). It was found that individual participants judged examined utterances consistently either as grammatical or ungrammatical and that all were able to reproduce the utterances of the others exactly as they were originally signed. Furthermore, the grammaticality judgments for the utterances examined did not differ between the participants.

Didactic Materials Production and Procedure

Four deaf and two hearing L1 signers were involved in the creation of the SZJ learning and teaching material. They had previously completed researcher training and were also participating in instructor training at the time. Only the deaf participants presented the materials in the videos and in the next phase the same deaf also took part in the teacher training. The raw material for the didactic materials was developed by a sign language linguist and reviewed by three other linguists. It then served as the basis for the training sessions for the deaf and hearing L1 sign language researchers and future language teachers. As the training sessions were filmed, they formed the first version of the didactic video material. The content produced in the training sessions for the researchers was supplemented with new observations, comments, and examples from deaf L1 signers so that the material could be better understood and accepted by the community at large (not as a prescriptive grammar dictated by the hearing community, but as a coherent description of the linguistic competence of deaf L1 signers). In the production phase, the filmed training sessions, the examples of language use, and the textual scripts were examined in parallel. The content was divided into eight chapters: one chapter on phonology, three chapters on morphology (sign formation, agreement, classifiers), and four chapters on syntax (sign order, locative clauses, negation, questions). There was also an introductory chapter explaining what language is and what grammar is, as well as instructions on how to use the didactic materials. For the comprehensive list, see Table 3. Four deaf sign language teachers were selected as presenters, each of whom was assigned a certain number of chapters. They prepared for the recording individually and in groups. The presenters rehearsed their chapters and created a draft video, which was discussed by all presenters and the linguists to find the most comprehensible explanations and vocabulary solutions. The final recording was made in the presence of all presenters and the sign language linguist, who all provided feedback. In this manner, errors, redundancies, or repetitions could be recognised immediately and corrected if necessary. After recording the final script, the video editor received the raw visual material and the recording script for the first edition of the video. Together with the sign language linguist, he visualised the entire video to detect recording errors and make the first cuts in the material according to the accompanying script. In post-production, the edited material was handed over to the graphic designer for the videography and animation process. In this phase, static images such as illustrations, photos, diagrams, tables, and maps were inserted, as well as the animations and signed examples of SZJ in use.

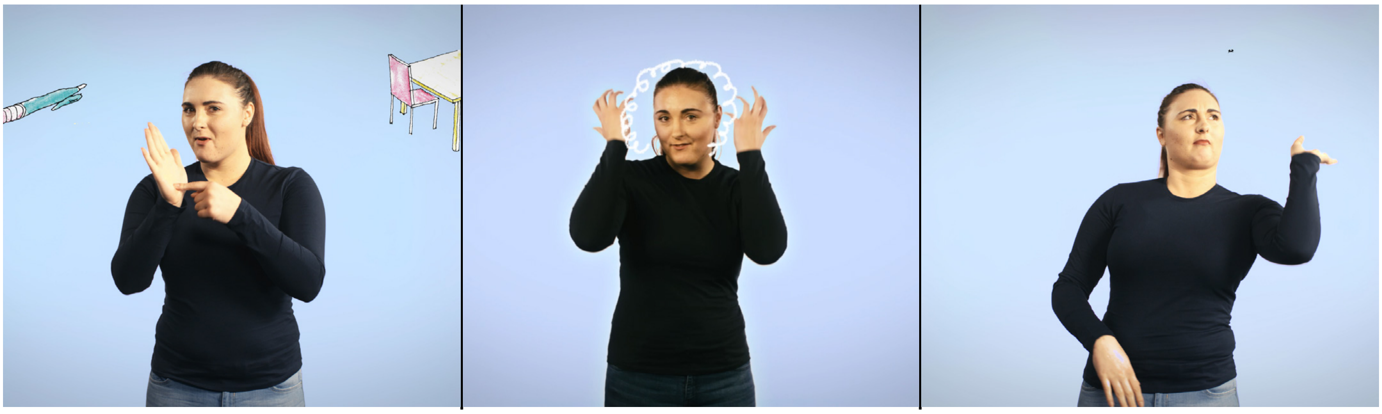
The complete video grammar was uploaded to an SZJ platform (with teaching materials, colouring sheets, SZJ stories, and various dictionaries: SZJ-Slovenian, etymological, SZJ-international sign and baby sign), which is run by Zveza društev gluhih in naglušnih Slovenije (the Association of the Deaf and Hard of Hearing in Slovenia), as well as to a dedicated YouTube channel 'Slovnica SZJ' (SZJ grammar). The SZJ platform was chosen because it is a reliable and established source of SZJ materials with stable funding and a regular pool of users who can access it via PC or smartphone applications. However, it does not provide services to monitor usage metrics, does not allow the sharing of specific content via social media, and is unlikely to be visited by a user unfamiliar with it. For this reason, we have complemented this traditional distribution with a YouTube channel, which is an accessible, familiar, user-friendly, and shareable service. However, it is generally not considered a reliable source. The quality of videos can vary greatly; some videos contain misinformation, false information, or even inappropriate content, and there are issues with advertising and privacy. These common pitfalls could lead users to perceive SZJ Grammar as an unprofessional or questionable source while simultaneously attracting new users.

Teacher Training

The training for language teachers was attended by five deaf and two hearing L1 signers. They had previously received training as researchers and their demographic details are given in Table 2. The participants of the training for language teachers were trained to learn and teach their

Figure 2

Different types of inserted graphics: static illustrations (the image on the far left) and animations (the images in the centre and far right).



Note. When the theory was illustrated, the colour of the screen was blue.

Figure 3

The Two Video Frames Show How the Short Clips that Served as Examples of How to Use SZJ Were Inserted into the Explanations

Note. Green (the screen and the presenter's clothing) indicates well-formed utterances (left frame), while red marks the illicit utterances (right frame). The examples were always shown to the right of the presenter. The presenter paused, looked to the left, and froze when the screen darkened. If necessary for the comparison, up to three examples were shown in succession (left frame) so that the presenter could later refer to them when explaining linguistic phenomena.

Table 2

Sex, Age Group and Educational Level according to the International Standard Classification of Education of Signers Who Participated in the Training for Teachers

Participant	Sex	Age group	Education
1	f	25-29	ISCED 6: Bachelor's or equivalent level
2	f	18-25	ISCED 3: Upper secondary education
3	m	30-54	ISCED 3: Upper secondary education
4	f	30-54	ISCED 3: Upper secondary education

language independently, to work with language resources, and to prepare didactic materials for teaching and learning SZJ. During the course, the participants used the materials prepared in the previous phases so that the materials could be tested. The comments and guidelines proved useful for the final editing.

SZJ Courses for L1 Deaf Signers

A total of 302 deaf L1 and delayed L1 and L2 signers participated in at least one 40-hour language course held in the premises of 12 local Slovenian deaf clubs (in the following Slovenian cities: Celje, Dravograd, Kranj, Maribor, Murska Sobota, Slovenske Konjice, Velenje, Novo Mesto, Koper, Kranj, Ljubljana-Center, Ljubljana-Zadobrova, and Nova Gorica). Five deaf and two hearing L1 signers trained as language teachers used the prepared didactic video materials to conduct 24 editions of a 40-hour course, twice in each deaf club. Since the project aimed to disseminate the didactic materials produced, the SZJ reference grammar was disseminated directly to deaf L1 and L2 SZJ signers via 12 deaf clubs, mostly during their regular weekly meetings. The duration of a session was 30 to 45 minutes.

RESULTS

This section presents the results of the project *Handy video grammar of Slovenian Sign Language:* two training phases, a production phase, and a dissemination phase. A total of 49 video segments were produced (total duration of 5:46 hours). They contained clips presenting eight linguistic topics (phonology, morphology and sign formation, agreement, classifiers, sign order, locative expressions, negation, and question formation) and one general topic (on writing and using a reference grammar). The explanations were entirely in SZJ and included examples of SZJ in use, drawings, and schematics. See Table 3 for additional information on the titles, presenters, and duration of each video.

On August 30, 2019, the final versions of the video material were uploaded to two online video platforms (YouTube channel and *Spletna TV* (Web TV), operated by the Association of the Deaf and Hard of Hearing in Slovenia). It is encouraging that the uploaded materials created as part of the project are still being viewed after the project has ended. This is suggested by the web analytics available for one of the two channels through which the materials are disseminated, namely YouTube (accessed August 30, 2023). From August 2019 to August 2023, there were a total of 6830 views (monthly average=139.39; SD=127.68), 4399 with subtitles (monthly average=89.78; SD=89.70) and 2423 without subtitles (monthly average=49.45; SD=49.90). The total viewing time amounted to 298.76 hours (monthly average=6.10; SD=7.15), 258.94 with subtitles (monthly average=5.28; SD =6.50), and 39.71 without subtitles (monthly average=0.81; SD=0.94). Figure 4 shows the development of monthly views and viewing time for the observed period, while Figures 5 and 6 show the monthly views for the same period by views with and without subtitles.

DISCUSSION

In this study, we have asked ourselves the question of whether (i) SZJ signers can be actively involved in the creation of an SZJ reference grammar that (ii) is accessible to the whole community. We have tried to answer this question by launching a project to create such a grammar: A group of L1 sign language learners were trained as sign language researchers and teachers; they participated in the creation of selected chapters of an SZJ reference grammar and presented these materials in language courses for the deaf SZJ community. Therefore, the simple answer to the research question is positive: to my knowledge, there has never been a comparable sign language learning project involving predominantly members of the deaf community, and, more remarkably, this is the first time that sign language has been used as a metalanguage in a sign language reference grammar. Although this grammar is based on a handbook for authors of sign language grammars, namely SignGram Blueprint (Quer et al., 2017), it differs from the other reference grammars that have emerged from it and have been published for Catalan Sign Language (Quer & Barberà, 2020), German Sign Language (Proske et al., 2020), Italian Sign Language (Branchini & Mantovan, 2020), Sign Language of the Netherlands (Klomp & Pfau, 2020) and Turkish Sign Language (Kelepir, 2020). The main goal of these reference grammars is to describe the language linguistically, while the SZJ Handy grammar specifically aims to help deaf SZJ users discover their language (the grammar) on a conscious and metalinguistic level. With this in mind, I would like to discuss the impact this grammar might have on the signers involved and the community. Note that this discussion is speculative, as no formal evaluation of the process as an integral part of the project has been undertaken.

First, it is known that deaf people have historically developed internalised negative attitudes towards sign languages (see Ladd, 2007 for British Sign Language) and that this is primarily due to the attitudes of the hearing majority towards sign languages (see Krausneker, 2015). More recent studies have shown that the attitudes of deaf people toward sign languages are becoming more positive (Hill, 2012; Supalla & Clark, 2014). There are several reasons for this change (De Meulder, 2018). The official recognition of sign languages in many countries has made sign languages more visible in society so that even hearing people are learning sign languages in many countries. However, the decisive turning point was the research that showed that sign languages are human languages (Brennan, 1975; Stokoe, 1960). Slovenian Deaf people have been claiming that SZJ is a language since at least the 1980s, but now, with the reference grammar, their claims have finally been confirmed. Moreover, the linguistic status of SZJ, which this grammar confirms, seems to be even more important to the community at the moment than the content of the grammar. Note, however, that hearing people also tend not to appreciate the content of reference grammars, presumably because they have historically been prescriptive rather than descriptive (Berry, 2015). However, the SZJ Handy Grammar is not prescriptive: it aims to provide an informed level of language description to make language interesting and meaningful to users. This

Table 3

The List of All Video Clips within the SZJ Reference Grammar

	Title	URL	Duration	Presenter
1	0.1 Introduction	https://youtu.be/qcZPQvZTiu0	03:52	1
2	0.2 What is human language?	https://youtu.be/Lpmj16IoTEU	06:20	1
3	0.3 What is the grammar of human language?	https://youtu.be/DQnVIMmIG7Y	06:51	1
4	0.4 How to use this reference grammar?	https://youtu.be/50gABKTEGnw	05:70	1
5	1.0 Introduction to phonology	https://youtu.be/1yDRzTQug6g	05:14	2
6	1.1 Place of articulation	https://youtu.be/wPcdzd15FYk	10:27	2
7	1.2 Handshapes and the selected fingers constraint	https://youtu.be/0mpCaf-0Mlw	08:56	2
8	1.3 Phonological features	https://youtu.be/vp_etW_P5Fw	06:22	2
9	1.4 Movement	https://youtu.be/1WW6poU1zd0	06:29	2
10	1.5 Non-manual markings	https://youtu.be/_6suNXwERUY	11:59	2
11	2.0 Introduction to morphology and sign formation	https://youtu.be/4L5LGpI3GJk	03:15	4
12	2.1 Sign etymology	https://youtu.be/wKf6jaVPcHg	07:50	4
13	2.2 Noun and verb	https://youtu.be/zryIp4k8c4s	04:18	4
14	2.3 Expressing event time and aspect	https://youtu.be/xxlLVRGnbaM	10:8	4
15	2.4 Adjective	https://youtu.be/S51N0i8DuPg	06:24	4
16	2.5 Pronouns	https://youtu.be/-zF8vQ8lCA4	06:12	4
17	3.0 Introduction to agreement	https://youtu.be/n-XxSAlfDxA	03:60	4
18	3.1 Signing space	https://youtu.be/YCdT51NceJo	06:70	4
19	3.2 Thematic roles	https://youtu.be/3cE9pOiFhe0	08:30	4
20	3.3 Manual agreement	https://youtu.be/7zqwEhLKiQk	07:36	4
21	3.4 Agreement auxiliary	https://youtu.be/HNjaJyjGq30	07:44	4
22	3.5 Irregular verbs	https://youtu.be/oq7WQpfgz3M	09:11	4
23	4 .0 Introduction to classifiers	https://youtu.be/8Fn86Uo-YZM	02:37	1
24	4.1 Iconic signs	https://youtu.be/IMrnRFhFPlc	07:46	1
25	4.2 Classifier predicates	https://youtu.be/y4qdB4_pmRw	06:39	1
26	4.3 Whole-entity, body-part, and handling classifiers	https://youtu.be/oZ-7DIyV4j8	06:50	1
27	4.4 Classifiers and sign order	https://youtu.be/KXDCWoAhAGY	06:41	1
28	4.5 Sign formation	https://youtu.be/Ew-PE3x0PBY	07:10	1
29	5.0 Introduction to sign order	https://youtu.be/JtWRtM-8HoE	05:44	3
30	5.1 Sign phrase	https://youtu.be/w63vPjGKZOo	08:49	3
31	5.2 Copular clauses	https://youtu.be/xudppLGEWC4	08:58	3
32	5.3 Unmarked sign order	https://youtu.be/q0wer4DXE0Q	10:20	3
33	5.4 Marked sign order	https://youtu.be/paAMVmpmDm0	10:39	3
34	6.0 Introduction to expressing location	https://youtu.be/ne35VZ1xmdo	01:56	4
35	6.1 Locative sentences	https://youtu.be/VnZ1YMPrqbI	07:23	4
36	6.2 Figure and Ground	https://youtu.be/Ymrs7AcK5zA	05:50	4
37	6.3 Non-dominant hand perseveration	https://youtu.be/SP7cGt3AMFk	07:45	4
38	6.4 Locative adverbials and expressing existence	https://youtu.be/3WdxDvHqNQ4	09:50	4

	Title	URL	Duration	Presenter
39	7.0 Introduction to negation	https://youtu.be/IFHZxBImecQ	03:20	3
40	7.1 Sentential negation	https://youtu.be/la9WZZD0HRY	08:27	3
41	7.2 Affirmative and negated sentences	https://youtu.be/31E5-DF6Rpo	08:39	3
42	7.3 Negative particles	https://youtu.be/3yoNs26n5lo	09:44	3
43	7.4 Negative pronouns and non-manual markings	https://youtu.be/4__tF8oDZ98	09:00	3
44	7.5 Negative verbs	https://youtu.be/6Tqy4DForVc	10:15	3
45	8.0 Introduction to question formation	https://youtu.be/kVAO68VnX9U	03:90	3
46	8.1 Content and polar questions	https://youtu.be/d0Mn3XjjyYY	06:17	3
47	8.2 Non-manual markings in questions	https://youtu.be/L7x4cL-8xbU	05:56	3
48	8.3 Sign order and agreement in questions	https://youtu.be/jdpzMF0MYcs	07:37	3
49	8.4 Scene-setting questions	https://youtu.be/nLOOQm5woWw	08:58	3
		Total duration	**05:46:20**	

Note. Uploaded to the two online video platforms on August 30, 2019, with the corresponding universal reference link, duration and presenter.

Figure 4

The Views and Viewing Time Per Month for 49 YouTube video Clips from August 2019 to August 2023

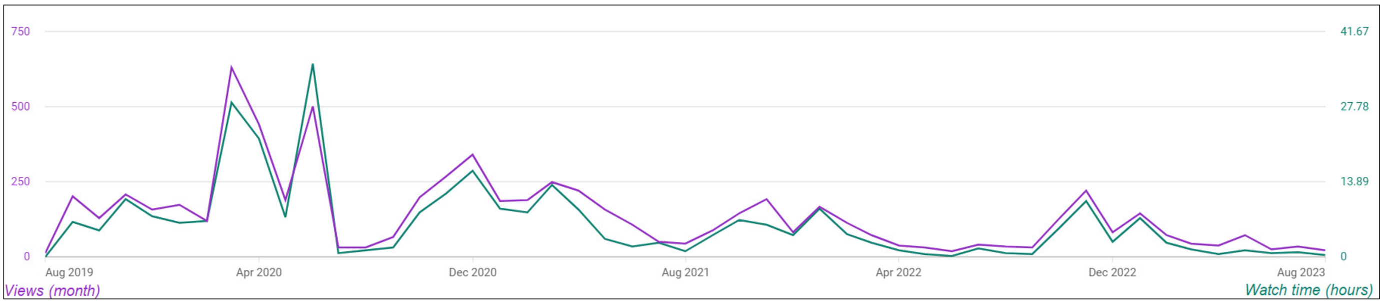


Figure 5

49 YouTube Video Clips from August 2019 to August 2023 by Views with and without Subtitles

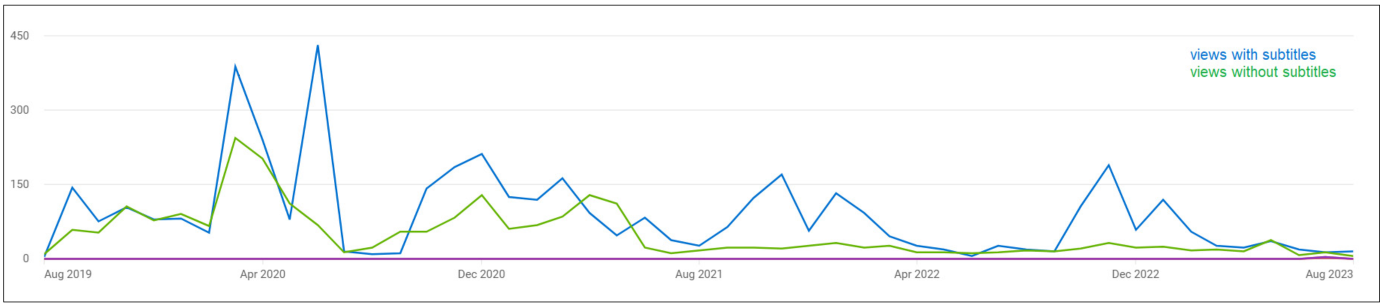
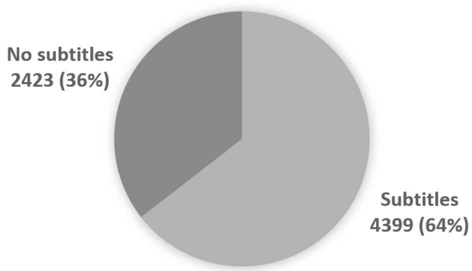


Figure 6

The Total of 6830 Views: 4399 with and 2423 without Subtitles from August 2019 to August 2023



function of a grammar was new to the signers involved in the creation of the grammar. Some of them who have been involved in the creation of SZJ dictionaries are used to discussing lexical variation in SZJ signs, but they have probably never thought about the underlying syntactic rules they follow when using their language in everyday situations. Therefore, four introductory clips have been added to the grammar, explaining what human language is, what the grammar of human language is, and how to use this reference grammar. In this way, users begin to understand the descriptive function of a grammar.

Second, the grammar recording sessions were perceived by the deaf sign language users as a formal situation, which is reflected in their tendency to occasionally switch to a variant of manual communication that reflects the grammar of the surrounding spoken Slovenian. The influence of spoken Slovenian is thus quite large, even among the deaf signers with high metalinguistic awareness. We have tried to avoid this by taking several steps, such as using SZJ as the metalanguage of the project, encouraging discussions, using graphic stimuli for data collection (instead of translating utterances from Slovenian which is otherwise a common practice), and including a larger number of deaf signers than hearing signers in a project. Involving the deaf SZJ community in the project under these conditions led to a positive attitude towards SZJ so that SZJ competence can gradually become a valued skill in the community (note that deaf signers were also paid for their participation).

Third, the materials are continuously viewed by SZJ users even after the end of the project. The monthly views for all 49 video clips included in the SZJ Reference Grammar can be interpreted as follows. The videos can be viewed with or without subtitles: out of 6830 views, there were 4399 (64%) with subtitles and 2423 (36%) without subtitles; note that views with subtitles amounted to 298.76 hours while views without subtitles were only 39.71 hours. It can be assumed that the materials without subtitles are viewed by L1 signers who have mastered their language and want to be informed about its structure and metalinguistic concepts, while the views with subtitles represent L2 signers who have not mastered the language and want to learn the language. Note, however that both quantitative and qualitative analysis of the use of the reference grammar is beyond the scope of the project and this article: a partial quantitative data presented in section (3) do not actually reflect the use of the materials – and certainly cannot provide information about the viewer's engagement with the material. Nevertheless, it can be said that the materials produced have great potential for use in formal and informal education even though they only contain explanations of SZJ linguistics without engaging exercises, signed texts, and references to deaf culture. In the future, the materials could be expanded and upgraded to a modern sign language textbook in the form of a video tutorial that covers not only grammar but also other aspects of language competence that are relevant and useful for teaching and learning SZJ as L1 and L2. This would encourage both individual signers and SZJ teachers to engage more frequently and thoroughly with SZJ Handy grammar.

Fourth, the negative attitude towards sign languages mentioned above does not change overnight. It is, therefore, important that the SZJ Handy grammar remains accessible to signers even after the end of the project, especially as no further promotion and maintenance of the materials is planned. For this reason, the entire grammar has been uploaded to two video broadcasting services whose existence on the Internet is guaranteed: a popular free platform, namely YouTube (where 'new' signers might come across it), and a platform run by the Association of the Deaf and Hard of Hearing in Slovenia (where 'old' signers know they will find it).

CONCLUSION

This article presented a method by which deaf people can meaningfully participate in learning and teaching sign language, benefiting themselves and the community. Recruiting and training SZJ signers to create an SZJ video reference grammar proved successful, as one-third of the total population of deaf SZJ signers participated in at least one language course developed and presented by the newly trained SZJ instructors. Furthermore, the available analytics show that the materials are continuously viewed by both L1 (mostly deaf) and L2 (mostly hearing) SZJ users even after the end of this innovative project. The project did not directly monitor the actual impact of the training of researchers and teachers and the dissemination of the reference grammar in the Deaf community, as there are no language tests for SZJ as L1 and L2. An important step in future research is to develop such materials and use them to more accurately assess the language performance of sign language users, especially as the subject of language support as presented in this study.

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DECLARATION OF COMPETITING INTEREST

None declared.

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Lingua-Cultural Identity in Translation: ‘We’ vs ‘I’ Cultures

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ABSTRACT

Introduction: The influence of culture on translation has been a prominent feature of translation studies in recent decades. The place of cultural knowledge in the formation and development of a translator’s cultural competence, however, remains debatable. This paper argues that, in addition to general knowledge of a target culture (history, geography, literature, traditions, artefacts, etc.), it is crucial to be aware of the most important components of its deep culture, i.e., its social organization and worldview, which in turn have a major impact on identity. The study further develops the notion of I-culture vs We-culture and their respective identities. We suggest that an awareness of such cultural factors should form part of translators’ essential knowledge about language and their professional training.

Purpose: The study aims to reveal linguistic and discursive manifestations of lingua-cultural identity in translating a Russian text into English. We explore nuances in the use of the pronouns *we, our* vs. *I, my* as well as some other markers of we-identity vs I-identity in the original Russian text of Vladimir Putin’s speech at the Valday discussion club meeting (2021), and how these were translated into English in the translation text.

Method: Selection of a text containing sufficient examples; close reading to identify lexico-grammatical features; comparison of source text and translation; analysis of examples; drawing conclusions. The texts were subjected to contrastive lexico-grammatical, pragmatic, and discourse analysis. Sociolinguistic and cultural studies were used to interpret the results.

Results: The findings suggest that a Russian text could express a more collective mindset than its English translation, which shows traces of what may appear a more personal/subjective focus. The study highlights the role of deep culture in discursive practices and demonstrates the relevance and effectiveness of an interdisciplinary approach to translation studies.

Conclusion: The study confirms the fact that manifestation of lingua-cultural identity can be observed at all levels of language, as well as in communicative strategies, and discursive practices. The task of how to accurately render these nuances in translation is a taxing one that requires a comprehensive understanding of the role of deep culture in discursive practices.

KEYWORDS

lingua-cultural identity, worldview, discursive practice, translation, multidisciplinarity

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INTRODUCTION

One dimension of the philosophy of language focuses on the relations between language, its users, and the human social world, which includes translation and cultural nuances involved in interpretation across languages and cultures (Venuti 2021). As Wierzbicka (2003) states, “every language is a self-contained system and, in a sense, no words or constructions of one language can have absolute equivalents in another” (Wierzbicka, 2003, p.10). Since it was realized that, in translation, it is not only languages that clash but also cultures, translation studies has undergone significant changes. The paradigm of equivalence absorbed a new paradigm, that of the “cultural turn” focused on sociocultural aspects of translation studies (Bassnett & Lefevere, 1990; Bassnett, 2002; Doorslaer & Flynn, 2013; Gambier, 2019; Lisheng, 2010; Sdobnikov, 2019; Snell-Hornby, 2006; Yan & Huang; 2014, among many others). As Gambier points out, “meaning is no longer considered as a mere invariant in the source text, but rather as culturally embedded, with a need to be interpreted" (Gambier, 2019, p. 357). Since Bassnett & Lefevere (1990), the influence of culture on translation has become the focus of extensive literature (e.g., Cranmer, 2015; Koskinen, 2015; Nida, 1993; Pym et al., 2006; among many others). The emphasis on linguistic 'equivalence' to the original of the translated text was questioned in skopos theory (Vermeer, 1978, Suo, 2015), which focused instead on functional aspects, and raised the question of cultural equivalence.

The question of the cultural knowledge necessary for the formation and development of a translator's cultural competence (e.g., Koskinen, 2015; Malyuga et al., 2018), however, remains debatable. This study argues that it is not enough to have general knowledge of a target culture (history, geography, literature, traditions, cultural artefacts, etc.). As Koskinen (2015) notes, the focus needs to shift away from discussions of how source texts represent their cultural origins, and of how target texts need to be made adaptable to theirs, rather "we need to learn to read more carefully the individual text we are dealing with, and to recognise and to value the unique network of cultural affiliations it develops, and to grasp the intended and equally unique affiliations" (Koskinen, 2015, pp. 179-180).

For that purpose, we find it crucial for translation training to support awareness of the most important components of the so-called 'deep culture' (Guirdham, 1999; Shaules 2007), i.e., social organization and worldview, which in turn has a major impact on identity (Bilá et al., 2020; Eslami et al. 2023; Sperckels & Kotthoff, 2009). The concept of linguistic worldview, according to Głaz (2021) suggests the idea that "languages, in their lexicogrammatical structures and patterns of usage, encode interpretations of reality that symbolize, shape, and construct speaker's cultural experience". This cultural experience includes, among other things, social relationships, patterns of social interaction with other individuals and groups. As Jenkins (2004) points out, humans routinely relate to each other, both on an individual and collective level, and in order to do that meaningfully and consistently, they resort to a repertoire of identification. Linguistic means of identification indicate how the speaker perceives herself, and how she relates to others. A key distinction here is whether identity is based in the social network/s to which one belongs, or if it is based in the individual. Hence, in this study the notion of I-culture vs We-culture (see Author1 et al., 2017a) is further developed. We propose these terms instead of traditional terminological designations "individualist" and "collectivist", in an attempt to move away from past geo-political landscapes with their potential ideological connotations, where "collectivist" might imply "socialist" and "individualist", "capitalist" (Author1 & Author2, 2016, p. 59).

Through the comparison of a Russian source text and its English translation, we aim to reveal a number of linguistic manifestations of lingua-cultural identity embedded in language, and the ways they are translated. We explore nuances in the use of the pronouns *we, our* vs. *I*, *my* as well as some other markers of we-identity vs I-identity. The research question emerges from two observations: firstly, that there are cultural differences between Russian and British society in the areas of interpersonal relations, lifestyle preferences, patterns of communication, and the like. Secondly, that this may pose translation issues, because the lexico-grammars of the Russian and English languages are best-suited to the expression of the cultural aspects of their own national groups. Such features may be observed in translation, and revealed in the preferences of communication patterns, as well as in the lexico-grammars of the Russian and English languages which are best-suited to the expression of the cultural aspects of their own national groups.

The paper consists of 5 sections. The introduction highlights the research problem, aims and research question/s of the study. Section 2 discusses an interdisciplinary approach in translation studies, and gives a brief explanation of the notions 'I' vs. 'We' cultures, focusing on Britain and Russia. The methodology section includes the aim, data, research questions, methods and tools. The research findings are provided and commented on in Section 4, followed by a discussion of the findings and concluding remarks.

THEORETICAL BACKGROUND

An Interdisciplinary Approach in Translation Sudies

Translators have always been aware of the peculiar challenges associated with the translation of cultural factors (Bassnett, 2002; Nida, 1993; Katan 2016). Bermann and Porter (2014) describe the 'cultural turn' in translation studies, in the 1980s and 90s, which led to the inclusion of insights from literary theory, sociology, anthropology, cultural studies, and information technology. According to Bednárová-Gibová (2018), more recent avenues of research in contemporary translation studies can be organized along cognitive, sociological, anthropological, technological, and economic lines. Scholars point to interdisciplinarity, multidisciplinarity, polidisciplinarity, and even transdisciplinarity as main trends in translation studies (see, e.g., Bednárová-Gibová, 2021; Massey, 2021; Sdobnikov, 2019).

The challenges of translating cultural features mainly depend on the fact that languages are not simply alternative codifications of a unitary, homogenous reality; rather, they arise from local specifics pertaining to distinct groups of people, and reflect long-standing social values, traditions, identities and the like, rooted in diversity and pluralism rather than in uniformity (Koerner, 1992; Lee 1996; Hussein 2012). As Wierzbicka (2008, p. 7) says, "the meaning of words provides the best evidence for the reality of cultures as ways of speaking, thinking and living."

The notion of equivalence plays a central role in most theories of accurate translation (Steiner & Yallop, 2001; House, 2006), and this must not simply operate at a lexico-semantic level, but must also reflect cultural distinctions. As House (2006, p. 344) says, equivalence

> is determined by the socio-historical conditions in which the translation act is embedded, and by the range of often irreconcilable linguistic and contextual factors, among them at least the following: source and target languages with their specific structural constraints; the extra-linguistic world and the way it is 'cut up' by the two languages resulting in a different representation of reality.

One current theorisations of translating cultural material relates to finding equivalents at a lexical level across source and target language; between, in Jakobson's terminology, "one verbal sign and another" (Albachten, 2014, p. 575). Bassnett (2002) refers to this as "linguistic equivalence". In those cases where the item to be translated has a counterpart in the target language, for example *cloud, sun, building, air, person*, etc., this is straightforward, and a high degree of "translational correspondence" (Teich, 2001, p. 210) may be obtained. Culture-specific terms are another matter, and ingenuity may even be required in intralingual translation, as Albachten explains in her discussion of a Harry Potter book, where British words like 'biscuits,' 'football,' 'Mummy,' 'rounders,' and 'sherbet lemons' in the original become 'cookies,' 'soccer,' 'Mommy,' 'baseball,' and 'lemon drops' in the American version (Albachten op. cit: 577). In the Russian context, terms like *матрешка* 'Russian doll', *валенки* 'felt boots', *уха* 'fish soup' would present similar issues.

The crux of our paper, howeer, does not regard such lexico/cultural items, which belong to "surface culture", but rather the abstract ideas of "deep culture" concerning worldview and social organization (Guirdham 1999, p. 48-50). These may manifest both at the lexical and grammatical levels, and especially at the level of language functioning. Personal pronouns are a case in point, that illustrate cultural nuances embedded in language and its use (see e.g. Kashima, Kashima 1998; Kim 2003; Markasova, Tian Wantziuan, 2014; Ngo, 2006, among many others). They may indicate the value of solidarity vs individuality in a culture, types of relationships, understandings of politeness and other sociopragmatic characteristics. In other words, they provide evidence that "culture and pronouns are deeply intertwined" (Na, Choi, 2009, p.1492).

Analysis of the frequency of personal pronouns in communication, which allows us to determine the preference for the pronouns 'I' and 'we' in a culture, involves taking into account a phenomenon like 'pro-drop' (Chomsky 1981, Ramat, 1987), i.e. the omission of pronouns in languages where this is possible. Russian has been identified as a partial pro-drop language, or one where the pronoun may be omitted under certain conditions (Bizzarri, 2015; Kasevich 2014). Pro-drop is an intrinsic feature of the general system of language that regulates the possibility of omitting actors in certain contexts, thus expanding the range of semantic and pragmatic options. Another relevant factor is culture, and scholars have suggested that the pronoun "I" is dropped whenever possible by speakers of so-called we-cultures, or those that discourage individualism, in contrast to I-cultures (for more details, see (Kasevich 1996/2004). Kashima and Kashima (1998) report that the ease which pronouns may be dropped in a language is an important indicator of individualism and collectivism. They claim that pronouns are dropped more easily and often in the languages of collectivistic cultures than in those of individualistic cultures. As Jakobson (1959, p. 149, our emphasis) observes, "languages differ in what they must convey and not in what they may convey". This is a relevant perspective, since it is not normally possible to omit the pronoun in English in declarative sentences.

The translator between Russian and English is thus faced with the question of how to render the grammar-dependent cultural nuances in each case. Jakobson's discussion of the meanings inherent in grammatical features (ibid., p. 236), exemplifies the terrain covered here. One of his examples refers to the English sentence 'I hired a worker', which, to be translated accurately into Russian, would require supplementary information: amongst other things, the gender would need to be indicated. In the English original this detail is left tacit, omitted both for grammatical reasons (the noun is gender-neutral; gender can only be signalled by pre-modification) and for cultural reasons, connected to social issues of gender equality or difference. Put briefly, the English sentence carries with it a pre-supposition that readers/hearers will recognise, since it is encoded in the culture – a 'worker' tend to be male. The pragmatic implications of this, in cross-cultural terms, may be appreciated by considering how greatly the meaning/s of the sentence would be altered by pre-modification: "I hired a male/female worker", where the focus on the worker's gender, from both the speaker's and the hearers' perspectives, would probably be unwarranted.[1] For an English-speaking politician, there is no option that suppresses the 'we' in, for example, "We shall fight them on the beaches". In Russian there is, and our paper ponders the pragmatic significance of these phenomena in Russian political discourse, as well as cross-cultural nuances in the way they are translated into English.

'I' vs ''We' Cultures: The Cases of Britain and Russia

Though British culture is often placed towards the 'individualistic' end of Hofstede's individualistic/collective cline (Hofstede et al. 2010), from an anthropological perspective it is possible to overstate the implications of such a result.

[1] In English the additional information concerning gender flouts Grice's communicative maxim of Quantity (give as much information as is needed, and no more. In Russian, however, it is a grammatical necessity.

As Bond (2002, p. 74) points out, Hofstede's categories are not without problematic aspects (see also Venaik & Brewer, 2013), and his use of the term 'collective', in particular, appears to conflict with the general sense of the word. In reality, his well-known definition of these terms is not sufficiently broad to embrace many aspects of social life that regard 'individual' or 'collective' behaviour:

> Individualism stands for a society in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family only. Its opposite, collectivism, stands for a society in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty (Hofstede et al., 2010, p. 92).

On the basis of such a definition, the identification of Britain as an individualistic society might appear to be curious. There are many 'strong, cohesive in-groups' in British contexts (e.g. boy scouts, golf/tennis clubs, churches, trade unions, the women's institute, political parties, masonic lodges, etc.), all of which may not provide lifetime support networks, but which do stress a collective note in a supposedly individualistic social set-up. Britain also has a rich tradition of games, such team games, that emphasise the team over the individual (football, rugby, cricket, etc.), which reflect and reinforce patterns of collective behaviour that, in the workplace context, play a crucial role within free-market capitalism (Cudd, 2007).

Recent social moves, however, have brought an individualistic element to the fore. These include the country's post-Thatcher embrace of neo-liberal ideology (Mullen et al. 2013), and the affirmation in media, and social media, of what has been called the 'Me generation' (Twenge, 2014). According to Featherstone (2009), the evolution of British sport, and in particular of football, can also be viewed as emblematic of wider, Thatcherite social trends that stress the individual at the expense of community, in its traditional sense. If Britain, then, may be regarded as a nation where traditional collective values are increasingly under strain the same, only more so, may be said of Russia.

Russia is identified by Hofstede and others as a typical collective culture, a country that, moreover, was "the dominant proponent of a Communist ideology, in which the goals of the state outweigh individual interests" (Tower, Kelly, and Richards 1997). In an empirical cross-cultural study of Anglo-Russian social attitudes, Tower et al. (ibid. p. 338) note that, for Russian participants, the preservation of 'in-group harmony' and following 'group goals' are key values, compared to the 'personal goals' identified as more important for Britons. The collapse of the Soviet Union, in the early nineties, led to the progressive opening up to capitalist practices of whole populations who had lived with a collective mindset for generations. It is too early to say whether Russia's greater role in the global marketplace will see the erosion of collective values as Russians adapt, en masse, to marketplace logic (Linz 2000). Though Russian culture is becoming more individualistic (Naumov & Puffer, 2000), and modern Russian society combines both ideologies (Mamontov et al., 2014), traditional Russian values such as solidarity and group-orientation are arguably still dominant (Author1 et al., 2017b). Linguistic research provides many examples (see Author1 & Author2, 2016; Author1 et al., 2017a), and the we-orientation of Russian culture can be observed at lexico-phraseological, morpho-syntactic and stylistic levels of language structure, in different types of discourse such as interpersonal, public, professional, academic. This feature of the Russian language is especially pronounced when compared with English, as in the following examples, where the crucial distinction is in the Russian use of the pronoun 'we'. In the examples below, from Author1 et al. (2017a) the Russian pronoun 'we' unites the Speaker and the Hearer (1), or the Speaker and the third person (2), while the English language emphasises the individuality of each:

(23) Rus.: *My* znakomy? (lit. 'Are *we* acquainted?')

Eng: Do *I* know *you*?

(2) Rus.: *My* s drugom khodili vchera v kino. (lit. '*We* with a friend went to the cinema yesterday.')

Eng:
My friend and *I* went to the cinema yesterday.

In this study, we explore the manifestation of these aspects of We- vs. I-identity in the translation of political discourse.

Hypothesis

Our hypothesis is that comparing an original text with its translated version/s, while not providing conclusive 'proof' of any large-scale intercultural hypothesis, may nevertheless reveal some lingua-cultural differences in terms of We/I identity. As Author1 (2015, p. 204) says, summing up the essence of the above reflections on language, culture, and nuances in translation impact of culture on the style of communication:

> Communicative ethno-style can be defined as a historically, culturally and traditionally predetermined type of communicative behaviour, the choice and preference of certain strategies and means of communication

This does not necessarily concern large-scale socio-cultural or ontological distinctions between nations or peoples, such as those implied by the Sapir-Whorf hypothesis. Such micro analysis might rather be suggestive of subtly different value orientations that guide thought and behaviour in the two countries, and may thus confirm the value of such research for translators or others who need to understand nuances of this kind.

METHOD

Data Collection

The data were taken from Putin's speech given at the four-day Valday discussion club meeting on 21 October 2021, in Sochi, which was published on the site "President of Russia" in Russian and English. Two texts were analysed, the original Russian text (4271 words) and its English translation text (5267 words). In selecting the Russian leader's discourse for the purposes of analysis, we follow a tradition within discourse studies that probes intercultural issues affecting national groups via the analysis of discourse produced by elite figures and national leaders (De Cillia, Reisigl, and Wodak 1999, Wodak, 2009, Flowerdew, 2012). This is, of course, not to suggest that whatever lingua-cultural conclusions we may draw from the president's discourse may be taken as representative of Russians en masse. Yet, it does inevitably reflect features of Russian communicative style which, as will be seen, are not easily conveyed into English. Unfortunately, we do not know whether the translator was a native speaker of English or Russian or a bilingual, which is important as the background of the translator could have influenced her translation decision. This could be seen as a limitation of the study. However, the translation was published on the official website of the President of Russia, and it is thus safe to assume that the anonymous translator has high levels of lingua-cultural knowledge. Our analysis shows that s/he does not make the translation literal, but rather seamlessly adapts it to the ethno-style of the English language.

Data Analysis

The study aims to reveal some linguistic manifestations of linguacultural identity in the original text, and how these are translated into English. On the basis of the above discussion of the dominant 'we-orientation' in Russian culture, and the 'I-orientation' that prevails in English, we expected to find numerous manifestations of we-identity in the Russian text and some inconsistencies in their translation into English.

We first of all focused on the personal pronouns *я* – *мы* and *I* – *we* used in the Russian and English texts (both in Nominative and other cases), and the corresponding possessive pronouns *мой* – *my* and *наш* – *our*. To compare their frequency, we conducted quantitative analysis. We also considered the indefinite pronoun *все* (all) as a possible marker of community, and analyzed its translations into English. Some lexical and stylistic differences of Russian and English texts, and their influence on communicative styles, were also considered.

RESULTS

The Pronouns *WE /OUR* vs *I / MY* in Russian and English Texts

Our study explores nuances in pronoun use and its translation, especially instances where the Russian permits elision and this option is not taken up by the speaker; in other words, where they have the option to omit the pronoun and choose instead to use it.

Some results of the quantitative analysis are surprising (Table 1). We expected to see a more frequent use of *мы* (we) in the Russian text than in English, a result which the above discussion of Russian 'we-identity' would suggest as more probable. However, we found 44 instances of the pronoun *мы* (we) in the Russian text and 60 in its English translation. Equally surprisingly, the pronoun *our* was also used more frequently in English than in Russian. The results of *я* – *I* appeared in line with expectations: 14 to 48 in the Russian and English texts, respectively. The possessive pronouns *мой* and *my* were not common, but were more frequent (by 7 to 3) in the English texts. Some of these findings are arguably due to grammatical differences, e.g. more frequent use of possessive pronouns in English than in Russian and need further analysis.

There were, however, some findings that do support the idea of we- vs I-identity, and thus conform with our main hypothesis. Results show that, in the Russian text, the personal plural pronoun *мы* (we) was used much more frequently than the personal singular pronoun *I* (44 times to 14) (see Table 1, below). It also noteworthy that the ratio of *we* markers and *I* markers in the Russian text is 4 to 1, while it the English text it is 1.6 to 1.

Omission of the First-Person Singular Pronoun "I" in the Russian Text and its Presence in English

In our data, we notice Putin's tendency to avoid using the first-person singular pronoun 'I', regularly supplied in the translated version. As mentioned above, in Russian, as in other Slavic or Romance languages, the inflexion of verb endings makes pronoun omission possible; following the norms of English grammar, the translator automatically adds the personal pronoun back into the verbal group. In (1), for example, Putin omits the personal pronoun, which the translator adds; in (2) there is a single explicit use of *я* (I) in the Russian text, while the English text has three:

Table 1.

Markers of We-Identity vs I-Identity

Russian				English			
We-markers		I – markers		We -markers		I – markers	
Мы (we)	444	Я	114	We	660	I	48
Мы (we) (Nominative case)	335	Я (Nom)	112				
У нас (Gen.case)	77	Мне (Dative)	22				
Нам (Dative case)	22						
Наш-а-и (our)	225	на мой вгляд мой/по-моему	3 3	Our	330	My (remarks, views, colleagues, opinion)	7
Total	**669**		**117**		**990**		**56**

(1) *Повторю*: безопасность – один из главных императивов.

I repeat, safety is one of our main imperatives.

(2) И еще раз *скажу*: *я позволю себе высказать* те мысли, которые *считаю* близкими.

And *I will say* this again: *I will allow myself* to express a few thoughts that *I subscribe to*.

Though Russian grammar permits the speaker a choice whether to use the pronoun or not, Putin consistently evinces a preference for elision. He uses the first person pronoun only in limited situations, mostly when he intends to clarify points of his speech or underline that what is being said is his own personal opinion: *я думаю / я имею в виду / я хочу отметить / я уже говорил | я уже сказал* (lit. ‘I think’ / ‘I mean’ / ‘I want to note’ / ‘I have already mentioned’ / ‘I said’):

(3) Вы знаете, *я уже как-то говорил*, *хочу* еще раз это сформулировать

You know, *I said* it before and *I will say* it again

In this latter example (3) , it is noticeable that Putin’s use of ‘я’ (*I*) occurs only once and extends over both verbal groups; in the English translation it is repeated at the start of both.

There are other syntactic constructions where the speaker’s *I* in Russian is not expressed morphologically. In (4) and (5), we see the verbs in past tense *упоминал* and *отмечал,* which are both translated as *I (have) mentioned.* Grammatically, these Russian forms only indicate singular masculine and could refer to the first, second or third person (I, you, he):

(4) Уже *упоминал* о проблемах международных институтов.

I have already mentioned the challenges international institutions are facing.

(5) Отмечал этот серьезнейший вызов и в своем выступлении на Давосском форуме.

I mentioned this formidable challenge in my remarks at the Davos forum.

Something similar can be noted in Russian constructions involving participles *убежден* (convinced) or *уверен* (sure), where the person is also omitted (6-7). Again, in Russian these adjectival participles indicate singular masculine but can refer to *I, you* or *he:*

(6) При этом *убежден*, что за подлинные ценности нужно побороться

I am convinced that it is necessary to fight for real values

(7) Уверен вы об этом много говорили на площадках этого дискуссионного клуба.

I am sure you have talked a lot about this in this discussion club.

Some other manifestations of the dominant first-person perspective in English can be seen in (8) and (9), where the translator changes an impersonal Russian construction to a personal English one through use of the first person pronoun (8), or the addition of a phrase which specifically anchors the observation in the subjectivity of its author (9):

(8) Важно отметить и другое (lit. It is important to point out one more thing).

I have another important point to make.

(9) Наконец, еще один тезис (lit. Finally, one more thesis)

Finally, there is one more point *I want to make*.

As we can see in the above examples, the English translation consistently construes the subjectivity of the speaker, even when the first person pronoun singular я (I) is not present in the original. We suggest that there are not only linguistic but also cultural reasons that account for translation solutions that personalise the message rather than, for example, using the impersonal versions in these last instances.

Moreover, in the translated text, the first person singular pronoun *I* is also supplemented by the possessive pronoun *my*, frequently absent in the original Russian text (10-11):

(10) Не раз *обращался* к нему, если вы обратили внимание, и в этом выступлении.

You may have noticed that *I have referred* to it several times in the course of *my remarks*.

Here, the translator personalises Putin's objectivised phrase 'в этом выступлении' (lit. 'in this speech'), and in (11), below, again adds the personal pronoun back in:

(11) ...специально *попросил* коллег вчера подобрать эту цитату (lit. 'specifically asked colleagues yesterday to find this quote')

I specifically asked my colleagues to find the following quote

In (10-11), we see the combination of *I* and *my* in the English text and their absence in the Russian original. In these examples there is a double expression of the 'I perspective' in English, construed through the pronouns *I* + *my*, where there is no indication of the first person in the Russian text.

We (Мы), Our Country (наша страна) vs Russian People, Russia

The data in this section gives clear indications of what has been suggested concerning the Russian mentality and we-identification, once more illustrating the issues involved in translation.

In (12), we find the manifestation of we-identity 3 times in the original text and none in the translation. *Мы видим* ('we see') as well as *у нас'* and *в России* have been omitted in the translation text. *У нас*, as an indicator of We-identity, requires some explanation. It consists of the preposition 'у' which signals belonging, and the pronoun 'мы' (we) in Genitive case. Depending on the context, *у нас* can mean 'in our (my) family / school / office / house / region / town / country', etc. In other words, it indicates the speaker's sense of belonging to a group, or a place.

In example (12), *у нас* is additionally specified by *в России* ('in Russia'), an optional clarification. Another we-identification is *наши граждане* ('our citizens'), which is translated as 'Russian people'.

(12) Но что-то там все по-другому как-то сейчас, *мы видим* (**'**we see' – omitted in translation**)**, происходит. Кстати, *у нас, в России* (omitted in translation), *нашим гражданам* в абсолютном большинстве все равно, какого цвета у человека кожа, он или она – тоже не так важно. Каждый из нас – человек, вот что главное.

However, things are turning out differently there. By the way, the absolute majority of *Russian people* do not think that the colour of a person's skin or their gender is an important matter. Each of us is a human being.

Similar translation solutions can be observed in (13 and 14) where *мы в России* ('we in Russia'), and *Россия, наша страна* ('Russia, our country') are both translated as 'Russia'. At times, then, the 'we-identity' element present in the Russian source text is elided in translation:

(13) … все это, может быть, кому-то покажется неожиданным – *мы в России* уже проходили, *у нас* это уже было [lit. ...we in Russia have already gone through this, it has already been ours].

It may come as a surprise to some people, but *Russia* has been there already.

(14) Перемены, о которых сегодня говорилось и до меня, и ваш покорный слуга их упоминал, затрагивают все страны и народы, и Россия, конечно, *наша страна*, – не исключение.

The changes mentioned here prior to me, as well as by yours truly, are relevant to all countries and peoples. *Russia*, of course, is not an exception.

All (Все) vs Everyone (Каждый)

Another manifestation of we-identity in Russian and I-identity in English is the use of *все* ('all') in the Russian text and its translation counterpart *everyone* (i.e. every person, every individual instead of the indefinite pronoun *all*) in the translation. According to our findings, *все* ('all') is used 9 times (Table 2):

The Russian term *все* (all) has been translated as *all of us* only twice (15-16):

(15) ....реагировать на последствия придется *всем* вне зависимости от политического устройства, экономического состояния или преобладающей идеологии.

All of us will have to deal with the consequences regardless of our political systems, economic condition or prevailing ideology

(16) ...общемировой вызов – это вызов *всем* вместе и каждому в отдельности.

… a global challenge is a challenge for *all of us* together, and to each of us in particular

Table 2

Individuality/Community in Translations of Все (All)

		Russian				**English**	
Community (group marker)		'Individuality'		'Community'		'Individuality'	
Все (all)	9	Каждый из нас (each of us)	1	All	0	Each of us	2
		Каждый (everyone)	1	All of us	3	Everyone	6
Total	**9**		**2**		**3**		**8**

Five times *все* (all) has been substituted in English translation by *everyone* which, we will suggest below, emphasizes individuality instead of community (17-20):

(17) *Все (All)* говорят о том, что существующая модель капитализма – а это сегодня основа общественного устройства в подавляющем большинстве стран – исчерпала себя.

Everyone is saying that the current model of capitalism which underlies the social structure in the overwhelming majority of countries, has run its course

(18) *Все (all)* все видят и все (all) все прекрасно понимают.

Everyone sees everything and *everyone* understands everything perfectly well.

(19) *Мы, как и все*, ищем ответы на самые острые вызовы времени. (WE – 2 times)

Just like everyone else, we are searching for answers to the most urgent challenges of our time[2]

(20) Кроме того, эта международная структура является носителем не только норм, но и самого духа нормотворчества, причем основанного на принципах равенства и максимального учета *мнения всех* (opinion of all).

In addition, this international body promotes not only international norms, but also the rule-making spirit, which is based on the principles of equality and maximum consideration for *everyone's opinions*.

In two cases *все* (all) has been omitted in translation.

(21) ...масштаб перемен заставляет *нас всех* (us all) быть особенно осторожными хотя бы из чувства самосохранения.

...the scale of change that forces *us* to act extremely cautiously, if only for reasons of self-preservation.

(22) Но главный международный институт – Организация Объединенных Наций – остается *для всех* (for all) непреходящей ценностью, во всяком случае сегодня.

However, the United Nations as the central international institution retains its enduring value, at least for now.

DISCUSSION

Our study confirms the value of cultural knowledge in the training of translators, since knowledge of the intricacies of language use, of patterns of lexico-semantic equivalence and cultural nuances will be vital to their professional activities. Cultural knowledge is an essential part of applied linguistics, which addresses such practical, language-related questions across a variety of domains and registers. Our findings lend tentative support to the above description of cultural distinctions between the two nations and their languages, especially to the importance of 'we-identity' in Russian. They also underscore the usefulness, in such comparative studies, of individualism / collectivism and their values (Hofstede, 2013; Hofstede et al., 2010; Triandis, 1995), as well as the relevance of these perspectives to the practise of translation. Such cultural and communicative nuances will always need to be taken into account by translators and interpreters, and solving the problems they pose is key in providing a reliable translation.

An overuse of the first-person pronoun 'I' does not look favourably in the Russian culture (Author1 et al., 2017a, p. 120) as it has an arrogant sound. There are, then, cultural reasons that determine the speaker's occasional or habitual omission of the pronoun, exemplified by Putin in this address. For the translator towards English this phenomenon may be easily dealt with: when a speaker omits a pronoun, the missing element will simply be added back into the emergent text. From the perspective of 'equivalence' it is plain that, to translate *скажу*, to take an example from our data, as 'I will say' is perfectly satisfactory, at the level of denotational meaning. However, if it is accepted that any Russian speaker exercises a choice over whether to omit the pronoun, and that choice depends on a nuanced awareness of cultural factors, then the question is not so simple. The speaker might feel, in a particular instance, that to use the pronoun would be to place an unnecessary accent on their own subjectivity; to suppress it would express the meaning together with the right degree of culturally harmonious self-effacement. This proposal is in line with the opinion of Kashima and Kashima (1998), who argued that people in collectivistic cultures often drop pronouns in conversation to reduce tension and maintain interpersonal harmony. As we have said, an important aspect of Russian culture is its stress on the 'we' factor above the 'I'; thus, a tendency to suppress the first-person singular pronoun could arguably be accounted for in these terms. However, the task for the translator becomes a severe challenge, since the grammar of the target language (English) requires them to highlight the subject performing any action, at least in formal speech of the kind dealt with here.[3]

As a further example of this trend, consider the translation of Putin's characterisation of future catastrophes and the measures necessary to face them. The Russian text is followed by the literal meaning, then by the actual translation:

(23)
Text:

Чтобы повысить шанс на выживание в условиях катаклизмов, нужно будет переосмыслить, как организована наша жизнь, как устроено жилище, как развиваются или должны развиваться города, каковы приоритеты хозяйственного развития целых государств.

2 Here the Russian original has a literal meaning of 'we like all', in English rendered as 'Like everyone else'.

3 In informal speech, subject omission is quite possible ('think it's time to go to bed', etc.).

Lit:

In order to increase the chance of survival in conditions of cataclysms, it will be necessary to rethink how our life is organized, how housing is arranged, how cities develop or should develop, what the priorities for the economic development of entire states are.

Translation:
To increase our chance of survival in the face of cataclysms, *we* absolutely need to rethink how we go about our lives, how *we* run our households, how cities develop or how they should develop; *we* need to reconsider economic development priorities of entire states.

In the literal version, which reflects the Russian original, we notice an avoidance of subjectivity through passivation ('how our life is organised', 'how housing is arranged'), through impersonalisation ('it will be necessary', 'what the priorities are'), and through the general avoidance of pronouns and possessive adjectives. The English translation inserts these features: the subject 'we' appears, performing diverse actions that, in the literal version, were impersonal, construed via the infinitive – '*to rethink, to go about our lives, to run our households, to reconsider'*. The presence of pronouns and possessive adjectives is also immediately apparent. On the basis of this fragment, it appears that the cultural preference for the Russian original is to represent reality in terms of abstract processes, while the English translation prefers to view it in terms of the deeds of social actors. Possibly the translator's choice is determined by knowledge that, to the Anglo ear, such impersonal prose has a tedious quality, remedied to a degree by the use of pronouns that remind the listener that 'we' actually need to do something.

CONCLUSION

In this study we aimed to reveal linguistic and discursive manifestations of lingua-cultural identity in translating a Russian text into English. Our findings suggest that specific features of English and Russian grammar, and speakers' discursive preferences may respond to underlying identity cues: we-identity in Russian, and I-identity in English (Author1 et al. 2017a) appear to be involved. While there seems to be a cultural preference in Russian communicative style for an avoidance of overt individualism – as we have seen, representations frequently feature objectivising formulae, pronoun elision and other such devices – in English it is often simply not possible to render such nuances. From our study, a view of English emerges which suggests that the preferred style for representing events is to include explicit reference to the actors performing them, a style which, as we have seen, the grammar at times imposes.

The study once again confirms the fact that manifestation of lingua-cultural identity can be observed at all levels of language, as well as in communicative strategies, and discursive practices (e.g. Bilá & Ivanova 2020, Eslami et al. 2023, among many others).The task of how to accurately render these nuances in translation is a taxing one that requires a comprehensive understanding of the role of deep culture in discursive practices. Our paper is thus a tentative attempt to demonstrate, in this Anglo-Russian case study, the relevance and effectiveness of an interdisciplinary approach to translation studies.

There is also, finally, a rhetorical dimension to the questions raised by our study, since the use of the first person plural pronoun is often identified as key in the discursive construction of consensus and legitimacy; it might be that this is more common in societies where a collectivist ideology dominates. This perspective might provide a topic for further research.

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DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Douglas Ponton: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

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Tatiana Larina: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

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INTERNET RESOURCES

Zasedanie diskussionnogo kluba «Valdai» [Valdai Discussion Club meeting] 21.10. 2021 http://kremlin.ru/events/president/news/66975

Valdai Discussion Club meeting, October 21, 2021. http://en.kremlin.ru/events/president/news/66975

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Fiction vs. Reality: How Students Discover Real-Life Representations in Prose Using Engaged Reading

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ABSTRACT

Background: The reading of fiction texts requires intense effort to integrate mind, emotion, and intrinsic reading motivation, in order to discover real-life representations. There is limited research in this area.

Purpose: This study employs the engaged reading strategy combined with discovery learning, in order to investigate improvements in students' competence in prose appreciation.

Method: This study used a mixed-method design. Thirty-two Indonesian Language Education students participated in the study. Data was collected using student worksheets, observation, and semi-structured interviews. Data analysis was conducted by identifying and interpreting the results of prose appreciation for each reading activity.

Results: This study found that while explaining the theme and through description students were able to activate prior knowledge. The students' reading motivation mainly focused on the intrinsic element of stories. They clearly understood the plot, characterizations, and messages, but supporting details varied because of the differences in students' knowledge, experience, and social background related to short stories. In the post-reading stage, students revealed new knowledge and mental imagery. Based on our findings, engaged reading combined with discovery learning can enrich students' experience and ability to elaborate information, as well as to discover new knowledge about real-life representation in prose.

Conclusion: Based on the research findings, teachers and lecturers are able to utilize the engaged reading strategy combined with discovery learning to promote students' ability to read literature. Further research should involve more diverse participants. Experimental research could also examine the advantages and disadvantages of engaged reading and discovery learning.

KEYWORDS

discovery learning, engaged reading, literary appreciation, prose, reading literature

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INTRODUCTION

Literature is not easily understood, since it uses figurative language the meaning of which does not always coincide with the literal meaning (Burke, 2015; Pollio et al., 2023). Therefore, students' ability to use their imaginative and sympathetic capacity as part of the engagement process with any textual stimulus is more complex than imagining the characters and events of the story (D'Olimpio & Peterson, 2018; Troscianko, 2013). Imaginative capacities mean that students may imagine pictorial detail and form mental pictures about the fictional character, setting, and plot (Kuzmičová, 2012; Magulod, 2018; Troscianko, 2013). For example, students can visualize the physical characteristics, perspectives, and emotions of the fictional characters in the story (Gasser et al., 2022).

Based on prior observations and interviews conducted with Indonesian Language and Literature Education students in Malang, Indonesia, it was found that students experienced obstacles in literature reading, especially when it came to prose. Discovering real-life representations of prose was difficult, since they needed help integrating their mind, emotion, and self-motivation. Therefore, students should be trained to read and appreciate literature by increasing critical thinking skills (Winarni et al., 2020). In the 21st century, students also need to master a variety of literacy skills[1], especially fiction text literacy.

Previous studies have investigated reading comprehension based on text type. In scientific texts, the reader's prior knowledge has a positive relationship with the process of understanding (Bensalah & Gueroudj, 2020; Khataee & Davoudi, 2018; Ozuru et al., 2009). Researchers have also found certain benefits in narrative fiction texts for reading comprehension. These narrative texts have been found: to (1) improve verbal abilities better than non-literary and expository fiction texts (Mar & Rain, 2015); (2) improve mental abilities (Pino & Mazza, 2016); (3) form inference in the mental state by utilizing social context; (4) improve theory of mind ability (Dodell-Feder et al., 2013); (5) enhance imagination and critical thinking about the story (Magulod, 2018); as well as (6) promote sympathy and empathy capacities (D'Olimpio & Peterson, 2018; Koopman, 2016). These benefits exist because of the relation between the reader's emotions based on knowledge and life experiences (Silva et al., 2012). In these studies, reading narrative fiction contributes positively to readers' knowledge and emotion. However, these contributions have not been explained rigidly in a series of reading activity processes in developing readers' knowledge and emotion: ranging from activating prior knowledge - to discovering new knowledge and mental imagery in the fiction text.

Therefore, reading processes must be implemented with appropriate learning models and strategies, in order to develop readers' knowledge and emotion through innovative and interesting learning (Magulod, 2018). Several studies have used different learning models in reading activities such as contextual learning using a lexical decision experiment (Silva et al., 2012) and transformative learning through fiction reading (Hoggan & Cranton, 2015). Discovery learning is also used in literature learning. However, the study by Cahyani and Yulindaria (2018) focused on fiction writing activities. Some researchers also utilized reading strategies in literature reading. These include: inquiry learning in fiction reading (Nico et al., 2016); scaffolded reading experience (Massey & Heafner, 2004); and visualization (Koning & van Der Schoot, 2014). Reading comprehension has been found to improve by connecting text with the students' prior knowledge through scaffolded reading (Massey & Heafner, 2004) and inquiry learning (Nico et al., 2016). Prior knowledge interventions increased reading comprehension through group work (Bensalah & Gueroudj, 2020; Khataee & Davoudi, 2018; Tarchi, 2015). Studies have also confirmed that classroom group discussions increase students' motivation and promote reading comprehension (Murphy et al., 2009) and critical thinking skills (Handayani et al., 2019). Thus, reading comprehension of fiction can be increased by optimizing students' knowledge and group work through learning models and reading strategies. However, earlier studies have not investigated the role of knowledge, emotions, and self-motivation in prose appreciation.

Previous research findings suggest a gap between learning models and reading strategies. This may be related to integrating mind (knowledge), heart (emotions), and flow (intrinsic motivation) so that students can find real-life representations in prose. The aim of this study is to describe prose appreciation competence using the engaged reading and the discovery learning model in a series of reading processes. This includes: (1) the pre-reading process; (2) the reading process; and (3) the post-reading process. The engaged reading strategy was selected to facilitate the reading process by integrating thought, feeling, and intrinsic motivation (Van de Weghe, 2009). The discovery learning model was selected, since it emphasizes the connection of real-life contexts to learning (Satriani et al., 2012). Discovery learning can facilitate prose appreciation and help find a holistic understanding of prose related to real life. The results of this study could describe students' ability profile in the activation, modification, and reformation of prior knowledge to generate new knowledge and mental imagery, in such a way that it develops cognition based on literature reading. Teachers can utilize these results, in order to determine the effectiveness of engaged reading and discovery learning in literature reading for their designed language learning activities.

LITERATURE REVIEW

Engaged Reading Strategy

Learning strategies may improve intellectual and emotional skills and determine reading purposes in the reading process because there is a sufficiently strong relationship between emotion and cognition. The optimal learning environment involves intellectual and emotional aspects as explicit learning targets (Ben-Eliyahu, 2019; Shernoff, 2010; Van de Weghe, 2009). The balance between emotion and cognition positively impacts students' intellectual modification and character. Character is a psychological aspect which causes individuals to act based on moral values and virtues (Berkowitz, 2011; Kristjánsson, 2015). Therefore, to improve students' learning outcomes, learning needs to be directed at the cognitive and emotional skills and the attitudes which

[1] National Council of Teachers of English. (2014). The NCTE definition of 21-st century literacies. http://www.ncte.org/positions/statements/21stcentdefinition.

students need in the learning and real-world context (Kranzler et al., 2014; Lotulung et al., 2018).

Based on these thoughts, engaged reading is proposed as a relevant learning strategy because it integrates mind, heart, and flow as its trains students to become skilled readers. The mind aspect refers to the development of thoughts and logic. The heart aspect sharpens inner sensitivity, while the flow aspect implies the clarity of reading processes and goals. Therefore, engaged reading strategies not only teach the appropriate strategies for reading but also guide students. Skilled readers can elaborate all text information by involving thought, feeling, and intrinsic reading motivation. Van de Weghe (2009) emphasizes that engaged reading strategies integrate the intellectual and emotional aspects needed by skilled readers in the reading comprehension process. Skilled readers are active readers. Galda (2010) states that a person can be an active reader if he or she can construct the meaning of the text transactionally and dynamically by utilizing the readers' tendencies, experiences, beliefs, value system, ability, behaviour, and knowledge through self-study (Edge & Olan, 2020). In addition, skilled readers can cultivate the flow aspect as a form of intrinsic reading motivation to become avid readers, as Burke (2015) stated. A reader who likes literature has a passion for literature and needs literature, even loves literature. Avid readers often experience a semi-conscious state in the processing of literary discourse. Therefore, reading interest is a solid motivational variable involving students' prior knowledge and experience related to texts. The absence of interest causes students to hesitate to read the text (Nordin & Eng, 2017).

In order to become skilled readers, students need to carry out a series of continuous reading processes. Engaged reading consists of three stages of reading activities: (a) pre-reading; (b) during reading; and (c) post-reading. The three stages are the Trinal Approach to Reading (Van de Weghe, 2009). The reader activates prior knowledge in the before-reading process which contains previous knowledge regarding the reading material. The reader will integrate the information collected during the reading, as well as their prior knowledge to gain new knowledge. In the after-reading process, information which has not been understood during the reading process is identified, in order to obtain a comprehensive understanding and conclusions from the text.

Teaching college courses is essential to enhance students' reading comprehension. The challenges consist of completing the readings and engaging in deep reading (Parrott & Cherry, 2011). Thus, an optimal learning environment requires various contextual, instructional, developmental, and interpersonal factors (Shernoff et al., 2014). The learning environment can achieve its optimal degree by utilizing engaged reading which can aid students in mastering the expected competencies.

In this study, students analyzed real-life representations in a short story using their knowledge and real-life experiences. The stories are fictitious, but students can learn from events experienced by the characters as messages for a real-life context. Students are trained to acquire literature reading competence through engaged reading strategies using their minds, hearts, and flow.

Discovery Learning

Discovery learning emphasizes discovery activities carried out by students, in such a way that their knowledge increases along with each learning process. Discovery learning is a heuristic model based on these learning processes because the method is student-centred. Students can initiate, discover, and reflect during learning activities (In'am & Hajar, 2017).

Since these activities focus on students, the teacher can facilitate student activities to implement the learning process and objectives. The teacher does not transfer knowledge directly to students but instead provides a stimulus to students to discover and understand the learning material. Therefore, discovery learning can help students enhance their intellectual potential, develop intrinsic and extrinsic motivation, facilitate the process of discovery, and strengthen their memory (Winarni et al., 2020).

The discovery learning process involves several stages. During the first stage, the educator offers incentives to the students for initiating their prior knowledge. During the second stage, students recognize issues identified in the learning material. In the third, students collect data related to intrinsic and extrinsic elements of the story. The intrinsic elements are: setting, plot, characterization, theme, point of view, and so on (Koopman, 2016; Yudar et al., 2019). Extrinsic elements refer to the relationship between text and context in fiction texts (Fradj, 2020), such as social, cultural, and political contexts. During the fourth stage, students conduct data analysis. In the fifth, students verify their analysis, in order to obtain advice and feedback from the other students and teachers. In the sixth, the students can draw conclusions based on the previous steps in this discovery learning (Winarni et al., 2020). Furthermore, discovery learning has potential core elements to identify students' learning outcomes (Prince, 2004).

METHOD

Design and Data Collection

Researchers in this study employed a mixed-method research design. The analysis focused on the frequency of occurrences of the engaged reading strategy used by the students. Quantitative analysis involving simple descriptive statistics was conducted using MS Excel. For the qualitative analysis, Atlas.ti version 9 was used, in order to interpret prose appreciation and identify students' reading competence. Student worksheets were used to collect data about students' prose appreciation results starting from the pre-reading stage, during reading, and post-reading stages. Observations and interviews were conducted to collect data about the processes experienced by students during the prose appreciation.

Participants

This research used a purposive sampling technique with several criteria The participants were: (1) students taking the Prose course; (2) students who have received and mastered the prose appreciation theory; and (3) students who have had experience in reading literary texts. Based on these criteria, 32 students of Indonesian Language Education participated in this study because they met all of these criteria. The selected sample consisted of 6 males and 26 females ranging from 19-21 years old.

Materials

Six short stories were read and analysed by the students: (1) *Tangan-tangan Buntung* by Budi Darma, (2) *Orang-orang Larenjang* by Damhuri Muhammad, (3) *15 Hari Bulan* by Hasan Al Banna, (4) *Pakiah dari Pariangan* by Gus Tf Sakai, (5) *Requiem Kunang-kunang* by Agus Noor, and (6) *Langgam Urbana* by Beni Setia. The short stories were selected based on the following criteria. First, the prose text has intrinsic and extrinsic elements that contain moral values. Second, the prose texts are not young adult literature but literary texts with language richness, intrinsic elements, and complex extrinsic elements that could trigger appreciation.

Procedure

Every student had to read and appreciate the selected short stories. Appreciating stories comprises several processes: reading the story; understanding the story; analyzing the story; and appreciating the story. Students were divided into groups consisting of 4-5 students who completed the reading process. Each group member was given a different short story text, so they were each responsible for understanding and appreciating their text. The integration between discovery learning and engaged reading consisted of the following elements: stimulation, problem identification, data collection, data analysis, verification, and conclusion - spread over three days of learning activity. Students were classified as having good prior knowledge, if they can clearly show the theme in the short story and explain the relationship between the theme and real life. They also have poor prior knowledge, if they can only mention themes without a comprehensive explanation.

Instruments

The questions listed in Table 1 were used as an instrument in this study, in order to obtain data about students' appreciation of the short stories based on their reading experiences.

Two other instruments were also used. One was a guideline for the semi-structured interview, which consisted of questions defined to obtain more information about students' knowledge and experiences related to these short stories. The other was an observation guideline used to describe the components and the steps to be observed.

Data Analysis

The elicited data was analyzed in several stages of prose appreciation. Data analysis was based on students' worksheet documents, interview data, and observation data. The data analysis consists of the nine stages defined in Table 1: (1) identifying the suitability and clarity of prior knowledge related to the short story theme; (2) identifying the characteristics of the readers' motivation based on the elements in the short story the readers are curious about;, (3) identi-

Table 1.
Appreciation Stages of Prose in Reading Short Stories with Engaged Reading Strategies

	Stages	Questions	Purpose
1	Pre-reading	What do you know about the theme of the short story?	Prior knowledge activation
		What do you want to learn from the short story?	Reading motivation identification
2	During Reading	What is the plot of the short story that has been read?	Plot analysis
		How do you describe each character in the short story?	Characterization analysis
		Please mention interesting supporting detail in the short story?	Supporting detail analysis
		What if you were one of the characters from the short story?	Visualization
		What is the real-life message represented in the short story?	Meaning interpretation
3	Post-reading	What have you learned from the short story?	New knowledge identification
		What do you think after reading the short story?	Mental imagery identification

fying the story's plot; (4) categorizing the characterization analysis based on the character description pattern and its clarity; (5) determining the supporting detail pattern based on the intrinsic and extrinsic elements chosen by the student; (6) determining the students' visualization pattern in positioning themselves in the short story; (7) determining the pattern of meaning interpretation based on the characteristics of the content and sentence structure; (8) interpreting new knowledge; and (9) interpreting mental imagery.

RESULTS

Prose Appreciation in the Pre-Reading Stage

Prose appreciation activities can be facilitated by using engaged reading and discovery learning that emphasizes the process. In this way students can elaborate on the information and find new understandings about real-life representation. Therefore these two processes were used in the present study. The research findings obtained during the pre-reading stage are presented in Table 2.

The results shown in Table 2 suggest that students' activation of their prior knowledge about the themes and their descriptions is sufficient (94%). Only 6% of the students did not express their prior knowledge specifically. In the short story *Tangan-tangan Buntung*, students revealed that politics is everything related to government and power. Students with sufficient prior knowledge already knew that leaders who violate the law should be punished according to the rule of law, even though they have power. The political law in the short story did not reveal justice. On the contrary, in the short story *Tangan-Tangan Buntung*, students with less sufficient prior knowledge only mentioned that the themes were politics or leadership in government.

Table 2 also shows that students have the reading motivation to understand the intrinsic elements in short stories (78%). They are interested in understanding the message of the stories, characterization, plot, language style, and so on. Meanwhile, students were also motivated to understand extrinsic elements (22%), such as Minang culture, West Sumatra, Indonesia, in order to understand the short story *Pakiah*.

Prose Appreciation During Reading Stage

The research findings obtained during the reading stage are presented in Table 3.

The results in Table 3 suggest that the students' ability to analyze the plot can be categorized as good, since they can correctly identify the plot type and any associated events. From the data obtained, 25% of students mentioned the plot types and details of events in the short stories, while 75% only mentioned the plot types. There were few students who could connect information from each event in the plot analysis.

During characterisation analysis, students identified evidence of each character's traits, behavior, or description. Most students tended to mention character traits (44%). For example, in the short story *Langgam Urbana*, Lik War is described as wise because he shared his experiences with the young people as insight, warning, or suggestion. Using the available data, students were able to analyze characterization (81%). Meanwhile, 19% of students needed help to perform characterization analysis well.

Students produced the same analysis based on plot and characterization. However, in determining interesting supporting details, students chose different quotes influenced by the richness of prior knowledge. Most students (59%) chose supporting details in the form of figurative language quotes containing the story's message, since it was more attractive than the other intrinsic elements. The writer controls the plot and characterization with the use of an interesting story and language. However, the author cannot fully control the reader's interest in supporting details because they are very personal and based on their attention, background, and experience.

Furthermore, when asked to visualize themselves as characters in the story, most students saw themselves as doing something useful (94%). In the short story *Orang-orang Larenjang*, if the characters violate a custom, they are expelled

Table 2

Research Findings on the Appreciation Ability of Prose during the Pre-Reading Stage

	Purpose	Findings	Frequency	Percentage (%)
1	*Prior knowledge activation*	Theme and its description	30	94
		Theme	2	6
	Total		**32**	**100**
2	Reading motivation identification	Intrinsic element	25	78
		Extrinsic element	7	22
	Total		**32**	**100**

from their tribe and lose their inheritance and descendants rights. Students visualized the misery of Julfahri's family life after defying tribal restrictions and prohibitions. In comparison, 6% of the students chose not to become the character but to become an observer watching the story. We discovered that students might fully immerse themselves in visualizing themselves as a story character through engaged reading and discovery learning.

In the message interpretation process, students might find the message as a reflection of life. However, the interpretation varied for each student. We found that most students interpreted the message of life in the short stories as an order or a prohibition in the form of an imperative sentence (40%). The imperative was more substantial than contradiction, suggestion, and causal sentences based on the degree of urgency. Order and prohibition were more direct in delivering the message than the others. This proved that

Table 3

Research Findings on the Appreciation Ability of Prose During the Reading Stage

	Purpose	Findings	Frequency	Percentage (%)
1	Plot Analysis	Plot type	24	75
		Plot type and details of events	8	25
	Total		**32**	**100**
2	Characterization Analysis	State the traits of the characters	14	44
		State the names of the characters and the type of characterization	8	25
		State the names of the characters		
		State the types of characterizations and traits	6	19
			4	12
	Total		**32**	**100**
3	Supporting Detail Analysis	Messages conveyed in a figurative language	19	59
		Description of characters/events	5	16
		Language style (figurative language)	5	16
		Message	3	9
	Total		**32**	**100**
4	Visualization	Visualize the events from the point of view of one of the characters	30	94
		Visualize the events from the point of view of one of the observers	2	6
	Total		**32**	**100**
5	Message Interpretation	Imperative sentence	13	40
		Contradiction sentence	7	22
		Suggestion sentence	7	22
		Causal sentence	5	16
	Total		**32**	**100**

Table 4

Research Findings on the Appreciation Ability of Prose during the Post-Reading Stage

Purpose	Finding Answer	Frequency	Percentage (%)
New knowledge identification	Message	18	59
	Other intrinsic elements	13	41
Total		**32**	**100**
Mental imagery identification	Message	23	72
	Other intrinsic elements	9	28
Total		**32**	**100**

students could transform message interpretation from the fictional context to the real-life context through engaged reading and discovery learning.

Prose Appreciation in The Post-Reading Stage

The findings obtained for the post-reading stage are presented as follows.

The results shown in Table 4 suggest that new knowledge and mental imagery identification were more in the form of a message element rather than other intrinsic elements. It showed that the new knowledge reflected the short story's message as a guide or advice in everyday life. Based on the objectives of the message written by students, there were two types of messages: personal and universal.

All research findings are illustrated in Figure 1.

Figure 1 demonstrates how engaged reading combined with discovery learning can strengthen students' capacity for prose appreciation**.** Each stage of the discovery learning process aligns to a step in the engaged reading method**.** In pre-reading, students receive questions identifying their prior knowledge and reading motivation. The reading stage, intrinsic and extrinsic elements of the story comprised the data collected and analyzed. Students visualized themselves as characters or as an observer. Thus, they could discover real-life representations and interpret the story's message. In the post-reading stage, the students' reading experiences were evaluated, in order to generate new knowledge and mental imagery. We discovered that engaged reading in collaboration with discovery learning facilitates students' reading experiences in a structured way. Thus, students knew what they wanted to read, learned what they had read, and thought about what they had read.

All the reading processes were part of real-life representation. Integrating the students' minds, hearts, and flow was the key to increasing the quality of literature reading. As literature reading requires reading abilities and readers' knowledge, students need to interpret messages and discover representations of real-life contexts in fictional texts to become skilled readers.

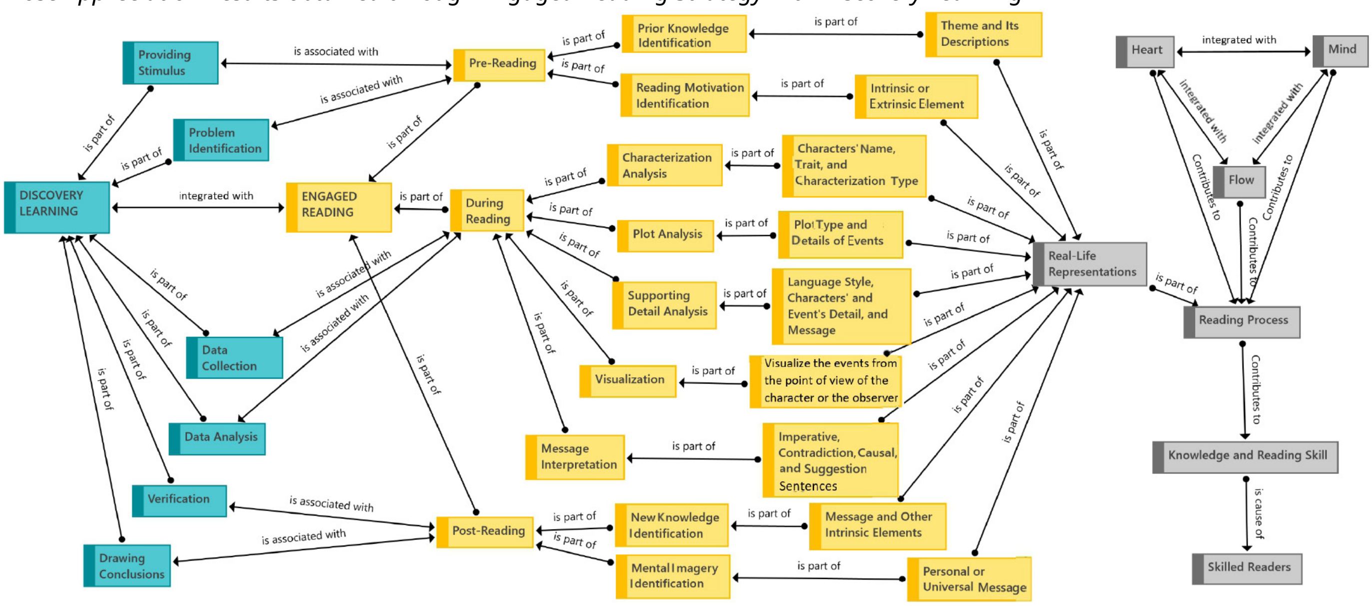
DISCUSSION

Prose Appreciation in the Pre-Reading Stage

Research findings show that prior knowledge combined with new knowledge from the short story produces a more sophisticated knowledge structure. Previous research also found that the suitability of prior knowledge with the text themes can promote the process of knowledge activation and reading comprehension (Bensalah & Gueroudj, 2020; Khataee & Davoudi, 2018; Rapp et al., 2014). The suitability of prior knowledge may positively impact the reading process, considerably increase reading fluency, and reduce reading errors (Chen et al., 2014; Priebe et al., 2012).

Figure 1

Prose Appreciation Results obtained through Engaged Reading Strategy with Discovery Learning



According to research by Marsh et al. (2012); Sua (2021), prior knowledge is essential for reducing reading errors and improving understanding of the content. Readers are required to comprehend the writer's intended meaning by connecting their previous knowledge with the text they read (Bensalah & Gueroudj, 2020; Khataee & Davoudi, 2018). Therefore, the reader's interpretation and motivation for cognitive story processing will determine whether they have the necessary knowledge to critically assess a fiction text or read it critically (Van Laer et al., 2014). We conclude that the suitability of prior knowledge and reading strategy can minimize reading errors in a fiction text supported by critical thinking skills.

Thus, students were highly motivated to understand intrinsic elements instead of extrinsic elements. Previous research found that the different dimensions of reading motivation triggered differences in reading speed, comprehension, and conclusion skills (McGeown et al., 2015). A previous study also found that certain readers pay attention to plot structure or read, in order to be intellectually challenged (Riddell & Van Dalen-Oskam, 2018). This study also confirms the result obtained by Riddell & Van Dalen-Oskam (2018) and McGeown et al. (2015). Students are motivated to understand intrinsic elements that contribute to reading comprehension. However, students still paid attention to the extratextual aspects of literature.

Students understood that reading and literature appreciation were essential activities before the pre-reading process. Predetermined purposes are essential in reading activity for the purpose of entertainment and knowledge enhancement (Burke, 2015) and language competence enrichment (Dehaene et al., 2010). However, among the various text types, only fictional texts could consistently predict the variation in reading skills based on the measurement of reading ability (McGeown et al., 2015).

Prose Appreciation During Reading Stage

The study found that students were able to understand intrinsic elements based on the text. Meanwhile, the readers' point of view influences the supporting details of the story which they have chosen. This research finding supports the findings reported by Van Laer et al. (2014) that the writer controls intrinsic elements. There are two antecedents in the process of reading fiction, namely: (1) the control of the storyteller or writer; and (2) the story acceptance from the readers' point of view. The storyteller or writer controls the intrinsic elements of the text. It was confirmed by the accuracy of students' analysis of the intrinsic elements. Meanwhile, story acceptance from the readers' point of view may include readers' familiarity with the text, attention, education, and gender. These elements tend to have a less significant effect on the reading process of the fictional text (Van Laer et al., 2014).

We found that students conducted a more detailed analysis of characterization elements instead of the plot in this study. Students' reading performance and ability to appreciate literature are positively correlated (Magulod, 2018). Students' comprehension of literature may improve their capacity for acquiring novel perspectives from unique characters (Hodges et al., 2018). This does not mean that the plot is unnecessary because it is constructed by the characters' interactions with each event they encounter (Magulod, 2018). As Koopman (2016); Mar & Oatley (2008) found, readers can feel the characters' emotions and experience events through the characters in the story, such as painful, ambivalent, and pleasant emotions. Previous studies have also found that narrative text evokes and changes readers' emotions through events or characters depicted and shown emotionally (D'Olimpio & Peterson, 2018; Mar et al., 2011) through clear or implied depictions of emotional conditions (Nikolajeva, 2013).

Visualization was confirmed to engage students' emotions in the story. It activates their minds and heart due to the nature of the short story as a work of fiction aimed at building knowledge and the reader's feelings. Silva et al. (2012) found that individual sensitivity to specific emotions is required, in order to understand the natural effects of emotions in reading thoroughly based on background knowledge of the readers (Sua, 2021). In the visualization, students established themselves as characters capable of resolving the problems or conflicts in the short stories. This was related to previous research findings that visualization is not an obscure picture (Starr, 2015). However, it contains a strong picture of subjective events involving emotions toward fictional characters in the story (Brosch, 2018) in the form of a movie or a photo (Sua, 2021). It creates a similarly clear picture of the readers' actual perception of the characters in the story (Brosch, 2017). Therefore, readers carry out constructive simulations about what will and might happen in the story, manifested in the form of thought by imagining themselves into the feelings and actions experienced by the characters (Altmann et al., 2014). Imagination immerses the reader personally in the story (Auyoung, 2018; Djikic & Oatley, 2014) through a reflection of stories based on the readers' personal traits (Koopman, 2016).

In addition, students also tend to visualize events from the observer's point of view rather than the characters' point of view in the story. Djikic and Oatley (2014) also found that readers can involve themselves in the story as actors or observers. Visualization has different intensities and impacts. It can improve the readers' cognitive and emotional experience influenced by how strong the visualization is (Brosch, 2017). Thus, we found that students who imagined themselves as the characters had more intense cognitive and emotional responses to the characters and events than students who just imagined themselves as observers of the story. This could be due to the reader's involvement in the story's fictional world.

In the visualization process, student participation in the fictional world can be identified from the differences of each student in imagining him or herself as the character and providing alternative actions. In this regard, Cheetham et al. (2014) found that identifying characters indicates matching and comparing representations of aspects related to the reader with aspects of the fictional world reflected in the characters and characterizations. During fiction reading, the psychological process may enable an understanding of the subjective experiences of the characters in the story (Kidd & Castano, 2013). It may also enable an understanding of complex social life through the process of meaning abstraction, inference, and prediction of plot development, as well as the interpersonal relationships between characters in the story (Mar & Oatley, 2008; Sua, 2021). We concluded that readers connected their real-life experiences with the story in the visualization process, which was confirmed by the student's point of view in the visualization process. For example, students assess character actions or propose actions which characters should take in dealing with an event based on the moral values they have encountered in real life.

By considering the character's motives, the reader can find the moral message in the story (Tamir et al., 2016). Students developed the character's behaviour and thoughts concerning themselves as members of society who needed to strengthen their social roles. Based on these findings, short stories encouraged students to appreciate human nature and improve their lives based on the moral messages contained therein. Fiction presents fundamental aspects of human needs which have a substantial long-term effect on the reader's life (Panero et al., 2016). Students are able to develop empathy for the events experienced by the characters. In previous studies, readers developed a sense of empathy and sympathy by exploring the social interactions and struggles of the characters (D'Olimpio & Peterson, 2018; Mar & Oatley, 2008) through the reader's awareness of interpersonal relationships. Thus, it affects the reader's sensitivity to interpersonal relationships in his or her life (Fong et al., 2013) and enables them to rehearse various resolutions to interpersonal problems (Dill-Shackleford et al., 2016).

Most students compiled the messages in imperative sentences: both orders and prohibitions. The remaining students employed contradiction, suggestion, and causal sentences. Students were able to affirm the moral messages in the short stories since imperative sentences have a more substantial direct effect than contradiction, suggestion, and causal sentences. Previous research also found that imperative sentences have a more substantial directive effect (Garcia-Carpintero, 2013).

Prose Appreciation in The Post-Reading Stage

By looking at their social reality, we found that students' new knowledge and mental imagery demonstrated empathy for the people and situations they encountered. It was confirmed from students' interpretations that they respond to the events in the story based on the virtues they know in real life. This tendency was also found in previous studies: readers' comprehension of reality contributes to interpreting virtues of stories related to the real-life context (Friend, 2017). Fictional texts enhance readers' empathy (Bal & Veltkamp, 2013; Djikic & Oatley, 2014) and sympathy (D'Olimpio & Peterson, 2018; Koopman, 2016) by forming awareness about social life knowledge and experiences (Oatley, 2016).

Specifically, the emergence of empathy in reading fictional texts was dualistic: engaging the reader in the story and feeling the characters' experiences. Story interpretation could be personal, social, and critical-adaptive to events in the story (Dill-Shackleford et al., 2016). Students are able to recognize and assess their value (Magulod, 2018) as personal growth (Sua, 2021). This study also found that the message of the short story was personal and universal. The messaged involved emotions and contained alternative actions, if students became a character. Other research also found that fictional imagination when reading a story had implications on a generalization process affecting the emotions and actions of readers (Van Leeuwen, 2013).

This study found that students visualize themselves in a fictional world, in order to discover real-life representations by identifying the personal and universal messages of the story. Vocabulary with unique semantic features represented a personal message, such as the first-person pronoun *saya* (I). Readers' reflection underlined the narrative effect on readers' belief built into the story (De Graaf, 2014). This was done through emotions which encourage transformation desire, critical self-reflection, and other processes which contribute to students' learning transformation (Hoggan & Cranton, 2015). In the personal message, self-reflection occurred by identifying characters with narrative persuasion elements (message). Thus, they contributed to empathy enhancement and character awareness (Hoeken et al., 2016) in the form of: self-transformation; new perspectives; critical reflection; correlation with personal experiences; emotional responses; and character modelling in the story (Hoggan & Cranton, 2015; Magulod, 2018; Sua, 2021). In addition, character descriptions can also generate negative responses from readers. In particular, a description of the pain or pressure and sickness of the protagonist characters increases readers' fear. Readers expressed empathy with the character by feeling the fear of the character (Hsu et al., 2014) Also the description of the unpleasant, feeble-minded, criminal, immoral, and inhuman nature of the protagonist creates a sense of alienation (Nikolajeva, 2013). Reading fiction is associated with marking inappropriate actions in a pessimistic scenario (harm scenario) (Tamir et al., 2016).

We argued that formulated universal messages are related to a broad social life. This study confirmed that universal messages relate to moral values which apply to human life. Previous research also found that the simulation of social content in fiction improves the reader's social cognition (Tamir et al., 2016) because fiction expresses values prevailing in the community (Caracciolo, 2012; Magulod, 2018). The values promoted readers' transformation to apply these values in real life. Although these values have been known and believed beforehand, the reader recalls their importance (Hoggan & Cranton, 2015). The values recall process occurs by finding the story's meaning, which is transformed into real life through interpretation, activation, and restructuring of the reader's background knowledge (Caracciolo, 2012).

New knowledge formulated by students, both personal and universal, contributed to the continuous formation of mental imagery. Tamir et al. (2016) found that mental imagery has precise or abstract characteristics. The clarity of mental imagery is emotional for the readers (Richardson, 2011). The emotional effect tends to exaggerate the story's details (Troscianko, 2013). Readers with solid mental imagery tend to be dissolved in the story and have a significantly higher level of empathy for the characters (Johnson, 2012; Johnson et al., 2013). Therefore, we concluded that students (readers) who formulate personal new knowledge tend to have sharper mental imagery than students who formulate universal new knowledge. Readers who involve themselves personally and emotionally tend to interpret in-depth messages based on real-life contexts. If the characters and events are personally reflected, then the mental imagery appears more straightforward and intense. According to research findings of Jajdelska et al. (2010), mental imagery clarity contains two fundamental aspects, namely the level of accuracy and intensity.

Implications for Education

The results and discussion suggest that the engaged reading strategy is suitable for prose appreciation, since it involves students' minds, hearts, and flow, as proposed by Van de Weghe (2009). Thus, students use their intellectual and emotional abilities to explore the message of the prose and flow as the highest level of their intrinsic motivation (D'Olimpio & Peterson, 2018; Shernoff et al., 2014). This is related to the essence of literary appreciation which requires thought, appreciation, and emotions conveyed by the writer to the reader. In addition, we argue that the engaged reading strategy is able to guide students to become immersed in the story's emotions. It may also train students to become intelligent readers who can define reading goals and promote new knowledge.

The three engaged reading stages were carried out continuously, in order to obtain comprehensive information which impacts students' character. Literature may contribute operationally to human intelligence in three dimensions: cognitive; psychomotor; and affective (Sugiarti & Prihatini, 2019). Therefore, students can increase their interaction and learning interest through the engaged reading strategy and discovery learning. The learning process can be carried out in groups using this model and engaged reading. Trasmundi and Cowley (2020) state that a reader is a person and part of a social organization. Thus, reading activities emerge because of these readers' role as individuals or social members. Furthermore, teachers can utilize discovery learning and engaged reading, in order to lead the students to participate in prose appreciation as personal and social readers.

In addition, the engaged reading strategy can promote an active learning situation, increasing students' motivation. The research findings also confirmed that such motivation is able to foster students' positive character, such as curiosity and hard work, thus positively impacting academic performance. The results of students' worksheets prove students' ability to appreciate prose. Students with a high level of motivation tend to be curious and work hard, in order to complete prose appreciation tasks. According to Hattie (2011), students' motivation generated several positive impacts: more optimal academic activities; behavioural improvisation; and enhanced self-esteem in classroom learning. A high level of achievement motivates the learning from reading fiction through the critical literacy approach (Nico et al., 2016).

Apart from the results and discussion, the limitations of this study need to be considered. Although several criteria for research subjects were defined (i.e. (1) students who are taking the Prose course, (2) students who have received and mastered the prose appreciation theory, and (3) students who have experience in reading literary texts), the sample of participants was limited to second-year students at a university in Indonesia. Therefore, further research is recommended involving participants from various universities in Indonesia or even from several countries with students from different years of study. The sample should also include a similar number of male and female participants: this would further contribute to the heterogeneity of the sample. The scope of generalization could then also be extended.

CONCLUSION

This study collected data on students' literary appreciation abilities to discover real-life representations in short stories. Prose appreciation ability in the pre-reading, during reading, and post-reading stages, is manifested in the students' readiness to carry out reading activities, and to appreciate human nature in delivering messages through short stories. In this case, readers were able to accumulate new knowledge on a universal basis. The readers' involvement with emotional intensity was also strengthened. Social sensitivity increased through empathy for characters and events interpretation as real-life guidance.

The application of engaged reading combined with discovery learning contributes to students' experiences of becoming skilled readers, since they are able to apply prior knowledge while processing new knowledge. Furthermore, teachers and lecturers can utilize the engaged reading strategy and discovery learning, in order to train students to think critically when dealing with existing problems. It encourages the development of human intelligence operationally in three dimensions: mind, heart, and flow.

Further research must examine literary appreciation competencies between engaged reading and discovery learning with other learning models. Compared to other learning models, this research will provide information about the advantages and disadvantages of engaged reading and discovery learning. In addition, research examining the effect of engaged reading and discovery learning on the ability to appreciate other literary works with various genres can also be conducted, in such a way that educators can understand the various benefits of implementing engaged reading and discovery learning.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Sugiarti: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

Arti Prihatini: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

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Three Male Primary Student Teachers' Intersections of Languaging and Teaching

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ABSTRACT

Background: This paper reports on an investigation of male primary student teachers about their planning and teaching over the course of the 2021 year. Three male student teachers' experiences are presented.

Purpose: This study highlights how they negotiated the intersections of self with school, identity, and gender as male student teachers.

Method: In weekly semi-structured peer group discussions student teachers were asked to describe the decisions that they made in planning, to reflect on the nature of the decision-making process that they went through, and about the consequences of this process. As necessary, questions were posed to the groups to further stimulate discussions. Written notes were taken from these discussions and used in combination with visiting lecturer notes about their teaching practice.

Results: It was through the combination of these classroom activities and teaching practice observations that ethnomethodology and symbolic interactionism intersected with these student teachers' self with school, identity, and gender. Ethnomethodology concerns how social order is established through social interactions while symbolic interactionism includes both verbal and non-verbal communication. It has been known that past experiences are the foundations of future experiences. The three male primary student teachers presented in this study support this assertion through their inward-looking and/or outward looking narratives.

Conclusion: This study adds to our understanding of the importance of what messages schools, colleagues, and the wider community are sending to male primary teachers about their work and worth as primary teachers.

KEYWORDS

ethnomethodology, languaging, male student teachers, primary education, symbolic interactionism

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INTRODUCTION

In 2019, McDowell and Klattenberg in an investigation into whether gender matters for classroom discipline in primary schools reported on the gender segregation of the labour market. In particular to this present study, they looked into the primary teaching sector in Germany and the United Kingdom (UK). McDowell and Klattenberg (2019) reported that 85% of German and UK primary teachers were female. They then went on to discuss issues around the perceived feminisation of teaching before focusing on their research around classroom discipline. McDowell and Klattenberg (2019) conclude their study noting that "gender is not an overriding variable here in being a teacher" (p. 961). More importantly to the present study, they went on to highlight "we must re-interpret language use as reflecting professional identity rather than gender identity" (McDowell & Klattenberg, 2019, p. 961).

In 2015, I reported on the feminisation of teacher education (Sexton, 2015). At that time, it was noted that New Zealand like many western countries reported a declining male primary teacher population. I then went on to note that New Zealand like many western countries has seen concerns raised over the 'feminisation' of primary education. In 2015, I agreed (and still do) with Morwenna Griffiths (2006) that the feminisation of teaching should not be about the numeric majority of women in teaching but should be seen as, "a response to perceived injustice. Power relations and power structures constrain who may belong in any social sphere" (Griffiths, 2006, p. 395). Specifically, the power structures and social sphere for this study both take place in New Zealand primary schools. Similarly, I align with Chris Beasley's (2012) social constructivist critique of essentialism. Beasley (2012) noted that social constructivists acknowledge specific social variation and complexity. Beasley (2012) goes on to note that social constructivists argue against any set identity as well as simple accounts of identity. As such, this study necessitated narratives to explore their intersections of languaging and teaching.

Stephanie Taylor (2010), in her book *Narratives of identity and place,* reports how narratives linked to place provide rich and flexible resources of people's work. For her, the personal and social identity is inseparable. She highlights that this focus does not seek a total account of experiences but explores how what a person says and how this contributes to one's own understanding. Specifically, how the temporal aspects of narratives link back to the past and suggest potential links to the future. These narratives then act as a cultural or discursive resource that enables one not only to make sense of one's experiences but also to shape one's expectations of the future. In terms of this paper, the experiences shaping the identity of student teachers take place in New Zealand primary classrooms. As such, narratives have been used by Hobbs and Davis (2013) as a means for students to make connections both within and beyond the subject. Hobbs and Davis (2013) highlight how narratives draw out personal responses in which personal meaning is attached. Most importantly for this paper, Hobbs and Davis (2013) report how students are able to, "build narratives about, and through, their learning, and as they construct narratives from their lived experiences" (p. 1290). For them it is through narratives that one is able to undergo identity formation while positioning themselves within the setting. This notion of positioning is also important in how Norris et al. (2005) support the use of narrative explanation. For Norris et al. (2005), narrative explanations not only use unique events form one's past as explanatory of other unique events but also some events are causes of others.

This paper sought to address the following research question: How do male students teachers reconcile the messages they receive from schools, colleagues, and the wider community about their worth and work as primary teachers?

LITERATURE REVIEW

Languaging

Bloome & Beach (2019) like McDowell & Klattenberg (2019) noted the intersection of language and teaching. Bloome & Beach (2019) examined how preservice teachers reflected on their literacy teaching interactions in writing. They drew on a languaging theoretical framework as it has grown out of linguistic anthropology, ethnography, applied linguistics, and sociolinguistics. Bloome and Beach build on Becker's (1991) distinction between language and languaging, "there is no such thing as Language, only continual languaging, an activity of human beings in the world" (Becker, 1991, p. 34). For Bloome & Beach, languaging shifts the focus from language structure and form to how language functions in interaction to achieve social action. In a broader sense, languaging is the process through which people make sense of, change, and shape their world (Jørgensen, 2004). This process, therefore, includes all the different ways people interact and react to each other; such as facial expressions (smiles, frowns, raised eyebrows, etc.), eye-gaze, body positioning, etc. (Beauchemin, 2019). In fact, Beauchemin (2019) noted in regard to investigations in teaching how a languaging perspective highlights the ongoing verbal and non-verbal interactions of both the teacher and students as they respond to each other.

Ethnomethodology and Symbolic Interactionism

To explore this intersection of languaging and student-teacher interactions, this study employed ethnomethodology and symbolic interactionism. Both are based on two assumptions: first, social life only has meaning though interpretation by those who are participating in it; and second, social life develops as its participants interact with each other (Goffman, 1977). Brickell (2006) builds on Goffman's (1977) early work noting, "ethnomethodology is concerned primarily with how social life and the individual identities and interpersonal relationships that characterise it are achieved or accomplished through interaction and language" (Brickell, 2006, p. 93). While Brickell was concerned about the construction of gender and sexuality from a sociological perspective, he provides a methodological foundation for this paper's study. Most significantly, Brickell highlights how ethnomethodological approaches allow for the study of gender based on action and interaction not essentialism. Furthermore, symbolic interactionism focusses on, "how meaning is created, modified and put into action by individuals in the process of social interaction" (Brickell, 2006, p. 94). Brickell notes that symbolic interactionism allows for a more meaningful, relevant, and useful account as the participant's agency is acknowledged as part of their engagement with their surroundings. As a result, ethnomethodogy and symbolic interactionism allows for the exploration of the ways people interact and interpret particular social contexts. In the case of this study, primary education in New Zealand.

Primary Education in New Zealand

In New Zealand, you are required to have at a minimum a bachelor's level degree in initial teacher education (ITE) to register as a teacher[1]. Those individuals who are seeking an ITE qualification have two options: a bachelor's level or a postgraduate level degree. A bachelor's degree normally takes three years to complete and comprises a mixture of education theory, curriculum content, and professional practice. Postgraduate study is normally a one-year programme as either a postgraduate diploma or master's degree. As students enter their postgraduate programme with at least a bachelor's degree, these programmes are more intensive and have a greater expectation of both self-study and self-management by the student teachers. Postgraduate programmes do cover education theory, curriculum content, and include professional practice but compress this into a one-year programme.

This study was conducted in a New Zealand university that offers both a Bachelor of Teaching (BTchg) (Primary Education) and a Master of Teaching and Learning (MTchgLn) (Primary Education). Education Counts[2] reported that in the 2020 school year 85.2% of primary teachers in New Zealand were female. In the Primary Education programmes in the College of Education in which this present study was undertaken in 2020 there were 77.2% female student teachers across both undergraduate and postgraduate ITE programmes indicating a slightly higher percentage of male student teachers. This paper reports on a part of a study that had ethical consent to investigate how and why primary student teachers made decisions in their planning and teaching. Three male primary student teachers, two BTchg and one MTchgLn student teachers, are being reported on here due to their experiences in negotiating their intersections of languaging and teacher-student interactions of self with school, identity, and gender.

METHOD

Background

The New Zealand Curriculum[3] promotes seven effective pedagogies. The curriculum document highlights these seven as "there is extensive, well-documented evidence about the kinds of teaching approaches that consistently have a positive impact on student learning"[4]. Six of these focus on how students learn while the seventh 'teaching as inquiry' focuses on how the teacher is learning to be more effective as the teacher through reflections on practice, reflection in practice, and reflections for future practice (Sexton, 2020). Student teachers, therefore, need scaffolding by more experienced practitioners in learning how to implement teaching as inquiry.

Participants

The participants reported on in this study were two male student teachers in the BTchg (Primary Education) programme in their final-year and one male student teacher in the MTchgLn (Primary Education) programme.

Methods and Procedure

This study was conducted over the 2021 academic year. The two BTchg student teachers were each assigned to a classroom for the entire academic year. These student teachers begin the school year in their classrooms working with their associate teacher as they take on more and more of the teaching role. They begin with a two-week initial block to establish relationships and then continue in the classroom for one-day a week leading up to a three-week block in which they are responsible for half the classroom planning. They then continue in this class for several more weeks of one-day per week leading into a five-week block in which they are responsible for the entire teaching programme for three of these five weeks. The MTchgLn student teachers start the school year in a classroom for one week and continue in this classroom also for one-day a week leading into a four-week block in which they are responsible for half the classroom planning. Then in the second semester of the university,

1 Teaching Council of Aotearoa New Zealand. (2022). *Becoming a teacher*. Retrieved from https://teachingcouncil.nz/getting-certificated/getting-started/becoming-a-teacher/

2 Education Counts. (2022). *Teacher numbers*. Retrieved from https://www.educationcounts.govt.nz/statistics/teacher-numbers

3 Ministry of Education. (2007). *The New Zealand Curriculum*. Learning Media.

4 Ibid, p. 34.

these student teachers move to a second school settings in a different year level for a seven-week block in which they are responsible for three weeks of full control teaching.

The participants were invited to participate in this study as part of their normally scheduled classes within their ITE programmes. For the two BTchg student teachers this was a total of 26 one-hour semi-structured peer group (Loughran, 2007) discussions over the course of the year (thirteen in Semester 1 and thirteen in Semester 2). For the MTchgLn student teacher this was 15 one-hour discussions over the course of the year (ten in Semester 1 and five in Semester 2). These student teachers in peer groups of 3-5 were asked to describe their decisions that they made in planning for their teaching: what they planned, why this was planned, and where to next based on what happened. Student teachers were given time each week to reflect on the nature of their decision making process as well as the consequences of their decisions (Lyons & Freidus, 2007). I would listen to their conversations, record elements of the discussion, and as necessary pose questions to further stimulate their peer group discussions. It should be noted that all the student teachers in both programmes voluntarily chose to participate as part of their normal classroom activities. As part of these classroom activities, all student teachers agreed to have the information recorded. This study reports on only three: Chris, Scott, and Henry (all names are pseudonyms) as I was also their supervising lecturer and observed them in their classroom practice. For Chris and Henry this was five times over the course of their year and for Scott, eight (I was his visiting lecturer for his repeat teaching practice). Each observation included a written running record of what was seen and heard by me in the observation. Each observation lasted approximately 60 minutes with a 30-45 minute debrief following. As a result, only their amended discussions are used in this study and all student teacher comments are used with their permission.

Data Analysis

As part of their university classroom activities, the student teachers were asked to describe the decisions that they made in planning for their teaching, to reflect on the nature of the decision-making process that they went through, and about the consequences of this process. As stated, these reflections were a part of the programme and the participating student teachers were free to include as much or as little information as they felt comfortable. The student teachers were ensured that while I would take written notes during the discussions no names of student teachers, schools, associate teachers, or any of their school students would be mentioned in this research.

It was through the combination of these classroom activities and teaching practice observations that ethnomethodology (how the student teacher established social order in the classroom through social interactions) and symbolic interactionism (how the student teacher used not only language but also non-verbal communication in the classroom) intersected with these student teachers' self with school, identity, and gender.

RESULTS

The Three Male Student Teachers

Chris described himself as your typical small-town boy, "I was born ___ (a small Central Otago New Zealand town)". Central Otago is a geographical region on the lower half of the South Island of New Zealand. Chris described his family as average for the area, "we were not financially well off, but we didn't starve". He went to one primary school (years 1-6), one intermediate (years 7-8), and one secondary school (years 9-13) all of which were within walking distance of his house. In 2019, he was an 18-year student. In this BTchg programme, some first-year student teachers are offered the opportunity to return home for their end-of-year teaching experience. Chris took this opportunity and was placed into the same intermediate school he attended six years previously. He was known to more than half the teaching staff as a former student. Chris found himself to be the only male in the school. He was not sure that this was the best choice as he noted:

> I know I was a first-year student teacher, but I really don't think they expected
>
> too much from me as a teacher, I really think they just saw me as the bloke who
>
> would play basketball at lunch with the boys.

He found forming relationships with the male students easy but had trouble keeping a professional distance, "one boy, that I knew had problems at home, would hang around me in class if things were not going so well." On more than one occasion he was reminded by his associate teacher and even the school principal that he would have difficulty as a teacher if the students only saw him as one of their mates (a New Zealand term used to describe friendships). His second-year teaching experiences were in unfamiliar settings which much younger students in a much bigger urban environment.

As a 19-year-old, Chris was struggling as his associate teacher and visiting lecturer noted "Chris is visibly uncomfortable with the physical proximity and touching of these [six- and seven-year-old] students." When establishing his teaching goals for his final year, his experiences from the previous years were discussed as it was reported that Chris needed to work on his teacher presence and how he presents himself as a confident and capable teacher. In this BTchg programme, student teachers are able to request the school setting they would prefer for their final year. Chris' final-year placement was with Year 7 students (children aged 12) as this was the age group, he felt would suit him and his teaching style the most. In 2021, Chris was a 20-year-old with a couple of years practice, he noted "I do not believe there will be any expectations placed on me, as a male student teacher, that I wouldn't expect to be put onto any student teacher while out."

Scott came into ITE from a previous career working to support individuals with a range of abilities and needs. He began ITE as a 32-year-old male student in 2020. In his MTchgLn programme cohort, the average age was 28 with an age range of 20 to 52. He had spent the previous decade working with individual's one-on-one. His previous employer as a referee described him as very adept at de-escalation with a calming presence and tone. Scott described himself, "I have been a social worker but really want to be in special education, so I need this degree to get into a classroom." His first teaching experience was in a combined Year 1-3 class (children aged 6-8). His mentor teacher noted that Scott tended to focus his attention on those students who he felt needed the most support and as a result neglected the other students. When this was noted, Scott replied, "how are we supposed to be agents of change if we do not focus on those who need us the most?" As this was his first placement, it was agreed that he could progress but would need to work on his teacher presence and a greater awareness of the whole class. His second placement in a Year 5 class (students aged 10) was a what he described as a "disaster, I tried to give them independence and self-management to be the 'best version of themselves they can be', they walked all over me." His mentor teacher had to take over the class repeatedly as the students were not engaged, not listening, and in some cases not even in the room. After he was failed for this placement and removed by mutual agreement by him and the school, he gave an honest assessment, "I was not their teacher, they knew I was not, and treated me accordingly." In 2021, Scott was in his second attempt to complete his teaching practice. He chose a Year 3 class (students aged 8) as, "they are not too young and not too old."

Henry was in the same BTchg cohort as Chris. Like Chris, Henry was from a small Central Otago town. Henry grew up on the mountain slopes of [his hometown]. Henry noted, "I spent as much time as possible on the slopes snowboarding." Henry and his circle of friends knew they had advantages that many others did not have. In 2021, Henry was a 22-year student. He spent a year after graduating secondary school "snowboarding around the globe." He and is two best friends planned a year holiday travelling from country-to-country snowboarding for as long as possible in as many places as they could. Like Chris, Henry also went back to his primary school in a Year 3 class (students aged 8) for his first-year teaching experience in a school setting where he knew almost everyone and they knew him and his family, "I loved going back to _____ school, I could talk to them about the different runs and the best way to drop down (descend the mountain)." Also, like Chris, Henry found it a challenge in his second year with Year 5 students (students aged 10), "we had nothing in common, none of them had been snowboarding." His final-year placement was in an intermediate school with Year 8 students (students aged 13) as "they are like young adults, and I can talk to them." Henry went into this placement with the expectation that his charm, easy manner, and good looks would carry him through, "I am really looking forward to this year, it is going to go well, I can tell."

For all three of these student teachers, their comments and opinions about themselves and their school experiences are not really that notable. These same statements have been repeated by numerous student teachers in many different ITE programmes around the world. What does become notable is how their languaging of self intersected with school, identity, and gender in their narratives as they discussed their teaching practice.

Chris' Intersection of Self and School

> Me: How did this year go?
>
> Chris: The teacher that I was placed with was amazing and gave me enormous amounts of time to prepare for, teach, and debrief from my lessons. I feel like I was treated fairly and was seen as an equal among staff and respected by the students.
>
> Me: How were you treated as an equal?
>
> Chris: My teacher always sat down with me at the end of the day and gave me feedback on my lessons and how I interacted with the children. She was well resourced and offered for me to use anything and everything that she had, and even make copies if I chose.
>
> Me: That was in class but what about the wider school community?
>
> Chris: I was also involved in a number of out of school activities, including helping coach and referee one of the school touch teams. I felt like a valued member of this school.

Chris ended his final placement having met all the requirements to complete his ITE qualification. As he stated, he felt as if he was seen as a teacher by both his associate teacher and students. His positive verbal language was reflected in his confident body language, he saw himself as a teacher and felt as if he contributed. An advantage of his ITE programme is the final year ends all content by early November so that student teachers are able to seek relief teaching to get straight into the teaching profession as New Zealand primary schools do not end the year until mid-December.

Many are often hired by schools to get this practice at the end of the year prior to them starting full-time teaching positions the following year. Chris chose to complete his year before looking for any teaching opportunities. In November, his positive image of himself changed.

> Me: You do not look happy; how did your interview go?
>
> Chris: I went to [school named] for a job interview and was offered the job rather than being interviewed for the job.
>
> Me: Don't you want this job?
>
> Chris: The school really wanted me only because I have a penis! There were no male teachers in the school, and it wasn't me they wanted, it was any male teacher they wanted.

It has been reported in many countries about primary teaching and male teachers (McDowell & Klattenberg 2019; McGrath & Sinclair 2013). Specifically for this article Cushman (2008, 2010) addressed this in New Zealand. Cushman (2008) reported on what some principals wanted in male teachers or what they wanted these male teachers to role model. Cushman highlighted that about half of her participating principals were looking for characteristics that would be found in any teacher. She went on to highlight that only 29% stated a male role model needed to be a good teacher. It would appear that after a decade and a half since Cushman surveyed principals in New Zealand, some are still looking for males not primary teachers as evidenced by Chris's comment above.

In New Zealand, beginning teachers register with the Teaching Council of Aotearoa New Zealand[5] for a teaching certificate that is required to be a teacher. As a provisionally certificated teacher (PCT), you are entitled to induction and mentoring for the first two years of full-time teaching. Chris stated he knew he was not the best teacher that has ever been in a classroom, but he has experienced being a welcomed and valued member of a school where he was able to learn and grow as a teacher. He went into this job interview prepared to discuss what he needed to work on to be an even better teacher. While this teaching position was in a school near his home, in a year group he would prefer, and would have allowed him to return home to start his career he was offended that this school only seemed to want him as he was the only male to apply for this position.

> [Chris sitting in my office shoulders slumped, head down, and hands clasped in front of him] What should I do?
>
> Me: This may be the school you want, but is it the job you want?
>
> Chris: I know I am not the best teacher out there, but I want to be in a school that wants me not just someone who can use the male staff toilet.

Scott's Intersection of Self and Identify

Scott saw his ITE programme as the next step in his career in helping students with special needs to, "be the best you can be". This was a statement Scott used at least a dozen times a day. What Scott was having trouble understanding is that his ITE programme was also about his learning and how he was progressing to be the teacher to the whole class not just one or two students in the class. For over a decade Scott had been working as a social worker and dealing with individuals. He came to his ITE programme with strong recommendations noting his empathy, ability to de-escalate tense situations, and work with individuals with a range of needs. Scott had difficulty in taking the strengths of his experience as a social worker and applying them to the whole class.

As noted, Scott was unsuccessful in achieving a passing standard of teaching in his second teaching experience. In one lesson, he had the students sitting on the mat (an area in the classroom without desks that students are called to which gets them away from their seats and any potential distractions) going over directions for 28 minutes, and even stated, "I know we are getting a bit restless. I understand this has gone for a while, but you need to show me you can be the best you can be." Then proceeded to continue with instructions for another five minutes ignoring that most of the class had given up trying to pay attention as Scott was focussed on Archie, Cooper, and Santiago (all names are pseudonyms). These boys have a history of not engaging well and going off-task quickly. As Scott focused on these three boys, the behaviour management of the rest of the class began to slip until this situation became untenable for the classroom teacher and the school. When discussing what happened, Scott noted:

> My social worker instincts took over, all I saw were three young men who needed help and support and I no longer even paid attention to the rest of the class. How do I be the teacher when all I see is what I could do to help them as a social worker?

In Scott's ITE programme student teachers are allowed to take a teaching experience twice. Should they fail the same teacher experience twice, they are automatically excluded from the programme. Scott failed once and knew his second attempt was his last opportunity to complete his degree. In 2021, Scott wanted to be and was placed in a Year 3 class:

> Scott: Last year was a bit of a shock. I was not expecting to be a 32-year-old failure, it was a bit hard to take listening to as everyone else talk about what they did, and I was sitting there knowing they all knew I had been asked to leave the school. I thought the teaching part of this master's was going to be the easy part but now I know what I need to work on.
>
> Me: What do you need to work on?
>
> Scott: Timing is a big issue for me, I need to balance slow or reluctant workers while not letting the others get bored and distracted. As well I have to get being Firm but Fair sorted. I am not a growly teacher, but I do have to be the responsible adult for the entire class.
>
> Me: How are you going to do these two things?
>
> Scott: I have been in touch with Mary (his new mentor teacher in this Year 3 class) and was pretty upfront and honest

[5] Teaching Council of Aotearoa New Zealand. (2022). *Becoming a teacher*. Retrieved from https://teachingcouncil.nz/getting-certificated/getting-started/becoming-a-teacher/

about what went wrong last year. So, we are going to team teach from day one so the students see us both as the teacher and then I can work with Mary on how to get better at lesson pacing and timing. Getting the Firm but Fair part is going to take some work, but Mary let me know she is not an angry teacher with students, so I will role model off her to see if how she works will work for me.

Scott went into this teaching experience with a much greater growth mindset. To help keep Scott on track, Mary stood at the opposite wall to Scott when the students were on the mat. If the instructions to the activity were planned to only take five minutes, at the five-minute mark Mary would indicate the time so Scott could keep to the planned pacing. Now instead of repeating the instruction numerous times to each individual student, Scott would send the class to their desks to work and any student who still was confused could stay on the mat. After doing this a few times, Scott realised which students kept staying behind and altered his instructions to asking them what was the first thing they needed to do at their desk, then where could they look to see (instructions were now written up on the teaching board) what was the next thing to do. By the end of this teaching opportunity, Scott's language, demeanour, and presence in the classroom was well on track to meeting the objectives of this teaching experience.

Henry's Intersection of Self and Gender

Henry wanted to be a teacher but also wanted to go back home to be this teacher. This would allow him to continue his passion for snowboarding. Like the rest of his cohort, he began his final-year teaching experience with the start of the school year. In 2021, this was a Year 8 class of 29 thirteen-year-olds composed of 17 girls and twelve boys. His associate teacher set his class up in rows where one row was facing the adjacent row. This facilitated his ability to walk around the room and in-between the rows with him able to make eye-contact with half the class at most times. Henry thought being in Mr Robb's class would be good for him as it would be two male teachers.

Me: What happened this year?

Henry: I had an older mentor teacher, who was not like me at all, we seemed to be on different wavelengths. He had his idea of how a male teacher should be, and that was not me.

Me: In what way?

Henry: I wanted to bring in new things to the class like mindfulness and meditation, you know, I thought it was really cool and I enjoy it in my life. He didn't like me bringing in new things that you know he like didn't know. I mean schools want more males and even here at teachers' college there are only a few males and even less as lecturers. There is no support for young males to be a teacher. No support for what you can and can't do as a male. This can be hard as you see female teachers doing or saying things that we as males can't.

Me: Such as?

Henry: Isn't it obvious, you had to come out to [School name] to negotiate a plan to allow me to complete this year. I told a group of girls who were not really engaging in class that I did like them but that wasn't going to let them not do the work.

Me: Where did this happen?

Henry: It was in class; they were in a group not really doing what they were supposed to be doing and I walked up to them and made the comment.

Me: What were you doing when you talked to them, like standing over them, or bending over them, hands touching them?

Henry: Even I know male teachers do not touch students, I just walked up to the group and lend down to talk to them as the rest of the class was working.

Me: Then what happened?

Henry: Another group of girls went home and told their parents that I said I liked a couple of the girls in class, and they called the school asking if their daughters were safe in the class with me. The school leadership freaked out and I thought I was going to get kicked out if you had not set up a plan with the school so I could stay and finish.

Me: How did this make you feel?

Henry: I feel like there is this whole ethos that we are not trusted in the classroom, female teachers can say 'I really like you, but I don't like your behaviour' and for them that is fine, but not for me! I find that, like it sucks, it sucks.

Me: You were not the only male student teacher there, is this how they felt?

Henry: Angus got on great, but like high school he is a rugby lad. And all the senior male teachers in [School name] all play rugby so he fit right in with the boy's culture, boys are hard, boys play rugby, blah, blah, blah. I went to [high school name] where rugby was everything, their rugby budget was bigger than any other in the school, it was ridiculous. Yeah, so Angus fit right in with their idea of what a man is, but I am not a rugby boy, and I don't want to be, and I am fine with that, and I don't want boys to think they have to be that. I think that might have led to the personality clash with Bryan [Mr Robb] but I don't have to be what they think their idea of what a man should be.

Henry agreed to the terms and conditions that were set in place so he could complete his teaching experience. At the time of the incident, Henry had been in this class for a total of twelve weeks and was in his second week of his three weeks of full-control teaching. He had one final week of full-control teaching and then a final week to hand the class back over to Mr Robb. We agreed that Henry would stay in the classroom to complete his week of teaching placement but at no point would he be in the classroom alone with the students. The parents agreed with a final condition that at the end of his third week, Henry would leave the school. Henry finished his placement.

DISCUSSION

In New Zealand, it is against the law to discriminate based on person's gender among several other categories[6]. As stated, McDowell & Klattenberg (2019) concluded "gender is not an overriding variable here in being a teacher" (p. 961) in regard to classroom discipline. However, some of what happens in classrooms seems to challenge this notion. This study supports Beauchemin (2019) work on the ongoing verbal and non-verbal interactions between and among teachers and students. Similarly, like Brickell's (2006) study this study focused on the gendered actions and interactions of three male student teachers as they negotiated becoming primary teachers through languaging rather than essentialism.

Henry stated he knew male teachers do not touch students but also recognized that female teachers were able to express themselves in ways that male teachers were not able. He also noted that some senior male teachers re-enforced some stereotypical gendered notions of what it means to be male in New Zealand. For those male student teachers who conformed or reflected these notions, they were seen by Henry to have an easier progression through their teaching experience. Chris' experiences in his first year were similar in coming up against stereotypical gendered notions. He was reminded by both his associate teacher and the school's principal that he needed to be the teacher not their mate. While he acknowledged he had issues with boundaries he also noted he felt as if there were no expectations place on him as a teacher. This seemed to be re-enforced after completing his ITE degree when he was offered a job only due to his male anatomy not his ability to be a teacher. Chris was able to acknowledge that in this case the discrimination was in his favour but was visibly unhappy with this situation. He commented that in this programme he has heard us state numerous times 'Education is founded on relationships'. So, when I asked him, what relationship is being established by [school name] offering you this job and is this how you want to start your career, he went from head down and shoulder slumped to head up, eyes wide open, and fists clenched. I then commented, you asked what you should do, your reaction just gave you the answer.

Scott offered a counterpoint to both Chris and Henry. While Chris and Henry encountered gendered notions of how they were experiencing their ITE programme, Scott's experiences were an exploration of the ways he interacted and interpreted particular social contexts. It should be noted that like McDowell & Klattenberg's (2019) study, gender was not the overriding variable for Scott. Like McDowell & Klattenberg's study, one of the main variables was how Scott learned to be in control of the whole class in terms of being Firm but Fair, i.e., classroom discipline. For Scott his main variable was how he had to negotiate a new identity that allowed him to use his previous skills as a social worker as he worked to become a primary teacher. He and his mentor teacher in 2021 worked as a pair in the classroom to support each other. The students saw the class as having two teachers from day one working together.

Intersections of Languaging and School

Dewey (1938) long ago noted that current experiences are the foundations of future experiences. Lortie (1975) took this a step further noting that student teachers will have experienced several thousands of hours of teaching before they begin their ITE programmes shaping their images of teaching and being the teacher. More recently, Taylor (2010) in her work around narratives of place reported the impact that one's experiences in shaping the future. So, while McDowell and Klattenberg (2019) may have reported that gender was not a variable in being a teacher when it concerned classroom discipline, it does appear to be an issue when it concerns gender, identity, and bodies of some male student teachers. Much has been written about the feminization of primary teaching both here in New Zealand (Cushman, 2008, 2010) and internationally (Griffiths, 2006; McGrath & Sinclair, 2013). The three participants' narratives in this study appear to raise issues around their *intersections* of power structures and social spheres, i.e., hegemony. Hegemony as defined by Encyclopaedia Britannica[7] is the dominance of one group over another. This domination is both often supported by legitimating norms and ideas and inhibits the dissemination or articulation of alternative ideas. The participating student teachers in this study offer their perspectives. Specifically, they evidence what Hobbs and Davis (2013) report as both outward and inward-looking narratives. Their outward-looking narratives allow them to go beyond the classroom's context while inward-looking created meaning from their experiences within the classroom.

Mills et al. (2008) highlighted that there are powerful discourses that construct primary teaching, and that these discourses question why any man would want to work with children. Mills et al. (2008) went on to highlight how and why male teachers often encounter contradictory messages about their work. While Mills et al. (2008) were focused on "attempt to remasculinise the teaching profession can impact upon male teachers who do not readily take up the socially prescribed imaginary male teacher" (p. 74); the implications from this study indicate that the three male student teachers in this study encountered similar contradictory messages. Chris felt he was being offered a job solely because of his male gender and not his teaching ability (i.e., being prized as a male not as a teacher). Scott felt he was

[6] Parliamentary Counsel Office. (2001). *Human Rights Act 1993*. https://www.legislation.govt.nz/act/public/1993/0082/latest/DLM304475.html

[7] Hegemony. https://www.britannica.com/topic/hegemony

being offered a job because of his social work expertise not as a teacher (i.e., valorised for his social work ability and experience not his teaching ability). Henry experienced both accusations of sexual predatory behaviour on young women as well as not fitting in with school's male culture.

Where they were in 2022

Chris turned down the job offer that he was uncomfortable with. Covid-19 has actually been an advantage for him as New Zealand's borders were very restrictive. So, in December 2021, there were schools across the country still actively seeking teachers for the 2022 school year. Chris got interviewed for a Year 6 teaching position that he accepted. He began the 2022 school year as a PCT in a school with an induction and mentoring programme for beginning teachers.

Scott completed his ITE programme in June of 2021 which allowed him to teach for second half of the 2021 school year. He was offered a maternity leave position in a special needs programme as they wanted him to start immediately to finish the school year. Two months into this position, he applied for a full-time teaching position in a Year 2 class. He asked me to be a referee. When questioned why he did not want to stay in the special needs area, he replied:

> I worked hard to become a primary teacher who has special needs skills I can bring to the class; I want to be a primary teacher. I may go back into special needs, but I want to be a primary teacher first.

Scott began 2022 as a Year 2 teacher.

Henry completed his degree in November 2021 and immediately moved overseas to take a snowboarding instructor position in Japan with every intention of moving back to New Zealand for our 2022 winter to continue being an instructor. He knows he has a few years to gain full teacher registration so wanted a year or two away from the classroom and then come back to a teaching position in [his hometown] for the 2023 school year.

One final intersection of Self with Identity, School, and Gender

I approached each interaction with these student teachers with the idea that for them each interaction was their truth at that time (Denzin, 1989; Dhunpath, 2000). These multiple collection points, which occurred over the length of the year allowed me to highlight, explore, and investigate their stories. However, this was a collaborative process with these student teachers and as such, I had an obligation to respect their ownership of the raw data. I continuously informed these student teachers about the collected data. Each participant reviewed their data to allow for its authentication and I respected and accepted any editing before using any material.

CONCLUSION

Narratives offer the opportunity to tell a story. For male primary teachers their narratives on how they experienced the social order in the classroom through it's set of social interactions (ethnomethodology) and how they used not only language but also non-verbal communication in the classroom (symbolic interactionism) highlighted the intersections of these student teachers' self with school, identity, and gender. These student teachers reported on the messages they received from schools, colleagues, and the wider community on what it means to be a male teacher in a primary classroom. Their outward-looking narratives allowed them to go beyond the classroom's context while their inward-looking created meaning from their experiences within the classroom.

Furthermore, this study allowed multiple opportunities for these male student teachers to describe the decisions that they made in planning, to reflect on the nature of this decision-making process, and about the consequences. These reflective opportunities helped these student teachers develop the skills necessary to understand their own intersections of school, identity, and gender, which they would not learn in their ITE programme. This type of reflection helped these students to advance their own reflective praxis as they reflected not only on what happened, but also what this meant for future action in the classroom. It would be beneficial to all student teachers to include more of this reflective praxis in their ITE programmes. For this to happen, it is recommended that student teachers are matched in a sustained collaborative mentor/mentee partnership that allows for the time and place to support student teachers in articulating their ethnomethodology and symbolic interactionism.

These stories are narratives and as such are powerful tools for expressing identities that are widely shared. It must be noted that this study was conducted at one university and reports on only three of the male participants. This limits the variety in narratives that are able to be presented. It would be interesting to compare these male student teacher narratives with their female colleagues in their ITE programmes, especially female student teachers in more male dominated fields such as maths and sciences. While these narratives were taken as truth for these participants, their narratives cannot be taken as representative of all male student teachers.

It would appear that 15 years on, similar contradictory messages were still be experienced by some male primary teachers. One remaining question in this area that would be beneficial to determine is how, if in any way, what these three teachers encountered is indicative of other males in primary teaching.

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DECLARATION OF COMPETITING INTEREST

None declared.

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Effects of Computer-assisted Language Learning (CALL) and Different Interaction Patterns on Vocabulary Development of EFL Learners

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ABSTRACT

Background: Research on the integration of Computer-assisted language learning (CALL) in EFL contexts has witnessed a significant advance due to the modern changes in language education and technology over the last decades. However, the effects of CALL on vocabulary development through different interaction patterns have not been investigated by researchers.

Purpose: Attempts have been made to assess the effects of CALL and Memrise software on the vocabulary development of intermediate EFL learners through the three interaction patterns: 1) pair-work interaction, 2) small-group-work interaction, and 3) individual content.

Method: A total of 100 male and female Iranian EFL learners were selected through convenience sampling and assigned into three experimental and one control groups, each consisting of 25 learners. The Oxford Quick Placement Test was taken to assure the homogeneity of the participants. Then, a multiple-choice vocabulary test was taken as a pretest. The three experimental groups learned vocabulary through Memrise desktop software with three different interaction patterns, while the control group learned the same through the conventional pattern. A reshuffled version of the pretest constitutes the subsequent posttest.

Result: The results of the comparison between all pretests and posttests indicated that there was a significant difference between the vocabulary scores of the pretest and the posttest of the experimental groups, indicating the efficiency of these treatments. It was revealed that the pair work was slightly more effective than small-group work and that these two types of intervention were more effective than individual-content interaction, where the latter was more effective than conventional instruction.

Conclusion: According to the findings, students are advised to take advantage of CALL-based facilities and participate in interactive activities.

KEYWORDS

Computer-assisted Language Learning (CALL), Individual-Content Interaction, Pair work, Small-group work, Vocabulary Development

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INTRODUCTION

A foreign language process of learning is subject to vocabulary learning. Vocabulary comprises the words of a native language expressed through a single item or phrase reflecting a specific meaning. In learning a foreign language, vocabulary is the primary tool for acquiring all languages. Learning vocabulary is viewed as a fundamental stage of language learning (Alhamani, 2014; Nation, 2001). An extensive vocabulary span in the target language would support reading, writing, listening, and speaking skills (Schmitt & Schmitt, 2020). According to Nation (2015), vocabulary is not an end in itself. A rich vocabulary makes the skills of listening, speaking, reading, and writing easier to perform. Lack of vocabulary knowledge as a tool was the critical reason for not exposing learners to the skills of reading and listening. The word frequency, saliency, learning burden, and learners' particular vocabulary needs and wants were the new elements acknowledged by Grabe & Stoller (2018), who insisted on vocabulary development as a multi-faceted phenomenon, which includes the knowledge of the word meanings, pronunciation, spelling, parts of speech, grammar, connotations, morphology, and the word semantics. Vocabulary development must be directed and appropriately guided to optimize learning inside and outside the classroom (Rogers, 2018). He also stated that vocabulary acquisition was essential to building students' other basic skills in L2. The prevailing two critical reasons are (1) the availability of many specific words, and (2) the learners' focus on this issue is low in this context and must be of primary concern for the teachers because learning vocabulary is complex (Ko & Goranson, 2014). When learners lack sufficient vocabulary, communication becomes weak, leading to a negative aspect of L2 vocabulary acquisition. There are many studies on practical techniques for promoting EFL vocabulary learning. Adopting an appropriate method for teaching and learning vocabulary is highly recommended. One of the approaches to overcoming vocabulary learning constraints is applying computer technology, which has influenced human exercise and training in recent years. The electrical technology application has recently encouraged researchers to examine the effect of computer technologies on EFL learners' vocabulary acquisition (Tabatabaei, 2012; 2021). Computers, combined with other educational methods, are linked to people's lives and jobs and highly contribute to our contemporary lives. Computer-assisted language learning (CALL) is searching for and studying computer applications in language teaching and learning. CALL includes different applications and procedures to teach and learn foreign languages, from the traditional method to more recent CALL applications.(Shield, 2008; Schmid, 2009).

To explore CALL research on vocabulary acquisition, Talarposhti and Pourgharib (2014) conducted a study that examined the use of computers for lexical skill development in terms of linking CALL with vocabulary acquisition and searching for effective ways to use CALL in vocabulary instruction. The results showed that the experimental group performed significantly better than the other group in a retention test. This suggests that the presentation of vocabulary in visual, aural, and sentence contexts in computer-assisted learning environments would enhance vocabulary learning and teaching (Talarposhti & Pourgharib, 2014). CALL provides a new outlook for teaching language, learning, and vocabulary acquisition; incorporating technology in education might assist learners in improving their language learning by significantly enhancing their vocabulary development (Mousavi & Nemati, 2017).

Applying computer-assisted language learning (CALL) to vocabulary learning rather than listening or reading was discussed by Vasilevski & Birt (2020). The effect of CALL on Iranian intermediate EFL learners' vocabulary learning was assessed with more versatility in many areas by domestic researchers. In the same vein, Ellis (2000) stated that applying computers has demonstrated significant effects on the achievement levels of language learners in recent years (Ellis, 2000).

Applying computers as an instrument in education makes it unique in student interaction. Through this interaction, learners can develop their language proficiency. CALL consists of substantial interactive elements that contribute to the presentation, reinforcement, and assessment of the material to be learned (Davis & Lyman-Hager, 2002). Because computers are considered the ideal medium for online interaction, students can reconsider their communication patterns. CALL's effectiveness relies on its application in meeting the language learning objectives for individualized learners in specific educational settings.

Over the years, besides teacher-learner interactions, the focus has shifted to examining interactions between learners who exhibit negotiation of meaning (NoM) and focus on form (FoF) (Foster & Ohta, 2005). The advantages of these interactions in L2 are highlighted in research done by Varonis & Gass (1985); Gass & Mackey (2007); Mackey et al. (2012), who are in agreement on this issue. As Furnborough (2012) stated, "language learning is a social activity that requires interaction with others" (p. 99). Bernard et al. (2009) and Borokhovski et al. (2012) described the interaction as an active exchange of actions and information among teachers and students and the student interactions with the curriculum content. Lewis (1997) and Hill (1997) pointed out that pair work establishes an environment where learners can practice the language by communicating, reducing anxiety, and increasing classroom participation. Kuo et al. (2014) found that learner-content interaction was the most robust interaction where the students 'requirements were met.

The input, output, and interaction hypotheses constitute the axioms of collaborative learning. Interaction, the most fundamental theme in sociocultural theory (SCT), highlights the supportive nature of instructors or more knowledgeable peers in providing scaffolding to the less competent learners on the path to the Zone of Proximal Development (ZPD) introduced by Vygotsky (1978) as the gap between learners' independent performance and when guided by more capable peers. A significant educational consequence of ZPD is its focus on interaction in learning and teaching contexts, which is the focus of this study. The teachers and students realize that vocabulary acquisition is impossible without interaction. Researchers (Oga-Baldwin & Nakata, 2017; Mourão & Nordi, 2018; Namaziandost & Nasri, 2019) have long advocated ESL/EFL learners' active participation in their interactions with peers. Teaching vocabulary allows students to understand and communicate with others in the given language, in this case, English. Shabaneh & Farrah (2018) believed that it was important to emerge with a new teaching style and to focus on student-centered teaching methods, which would result in graduating students who could comprehend the language and communicate efficiently. Because there isn't much research in Iranian schools about how to use CALL to help students learn vocabulary through three different types of interactions: pair work group (PWG), small work group (SWG), and individual work (IW), this study aims to find out how CALL affects students' vocabulary growth through these three types of interactions.

LITERATURE REVIEW

Social Constructivism

Social constructivism is a learning theory proposed by Lev Vygotsky in 1968. The theory states that language and culture are the frameworks through which humans experience, communicate, and understand reality. According to Vygotsky (1978), language and culture play essential roles both in human intellectual development and in how humans perceive the world. In social constructivism, social interaction and collaboration are essential for learning. Individual cognitive development cannot be achieved in isolation, and social enterprise is a need for learning (Nassaji & Tian, 2010).

Computer-Assisted Language Learning (CALL) in Language Education

Following the current learning theories as a field that arose towards the end of the 1970s, computer-assisted language learning (CALL) has been interesting for the researchers who are studying language learning and technology. Computer-Assisted Language Learning (CALL) applications transform students' learning attitudes and heighten their self-confidence (Lee, 2001). CALL is a product of the advances made in computer technology with substantial potential for English language teaching. Many studies on vocabulary learning support the CALL application and indicate its positive effect. The contribution of computers in and out of the classroom is inevitable for language teachers and learners (Ahmadi, 2017).

Interaction in L2 Acquisition and Vocabulary Development

The role of input and interaction in L2 acquisition is also an important issue. Allright (1984, p. 156) points out that interaction is an essential fact in classroom pedagogy because everything that occurs in the classroom happens through a process of person-to-person interaction. When the nature of classroom interaction is considered, the socio-cultural theory's significance becomes apparent as peer and teacher's assistance repeatedly takes place in student-student and student-teacher interactions. In ESL and EFL classrooms, vocabulary resources are available to assist students in engaging in meaningful interactions. In these interactions, learning moves from other-regulated to self-regulated; students consider themselves both novices and experts (Mirzaei et al., 2017).

Related Studies

There are many studies on practical techniques for promoting EFL vocabulary learning. The pretest and posttest are the main components of measuring the learners' progress in learning vocabulary. Adopting an appropriate method for teaching and learning vocabulary is highly recommended. Technology application has recently encouraged some researchers to assess the impact of applying computer technologies on EFL learners' vocabulary acquisition. Emami & Amirghasemi (2022) assessed the effect of computer-assisted language learning on improving learners' vocabulary learning. Regina and Devi (2022) assessed the efficiency of computer-based vocabulary instruction in English language classrooms and evaluated research on the usefulness of computer-based vocabulary acquisition, particularly in English language classes. The findings of these studies indicated that computer-based vocabulary learning is a frequent and effective approach to developing and learning new words. Wiharja & Cahyadi (2022), using Vocabulary.com as Computer Assisted Language Learning (CALL) to assess the vocabulary acquisition of the learners. Results showed that utilizing Vocabulary.com was effective in vocabulary acquisition for first-year undergraduate students.

Regarding the role of interaction in vocabulary development, Ariffin (2021) investigated the effectiveness of student collaboration as a technique for improving vocabulary development among a group of ESL learners. Two types of data—qualitative from the teacher's observation and the students' interviews—and quantitative data from the pretest and posttest were collected. The result of the t-test indicated that students outperformed vocabulary knowledge after studying collaboratively, and they had a positive attitude toward collaborative learning. Huong (2006) and Mirzaian (2020) assessed learning vocabulary in collaborative groups at the university level, compared the results with the conventional method, and found that group work affected learning vocabulary. The analysis of covariance reveals that the experimental group outperforms the control group in learning and retaining vocabulary. The advantages of collaborative learning vs. individual learning for L2 vocabulary learners were assessed by Nassaji and Tian (2010).

Considering the role of CALL in vocabulary, Delavari Khalifehkari and Pourhosein Gilakjani (2022) investigated the effect of CALL on intermediate EFL learners' vocabulary learning and compared it with traditional teaching methods. A quasi-experimental design was used, and 80 students were chosen based on their performance in an Oxford Placement Test (OPT) and were randomly assigned to the experimental and control groups. Six reading comprehension passages consisting of 72 new words were selected from the book "504 Essential Words" and used as the pretest for the study. Then, the experimental group received twelve sessions of treatment, which consisted of teaching vocabulary through different tools on the computer, such as related pictures, videos, textual highlights, PowerPoint slides, or Narsis software, while the control group received the traditional way of teaching, such as providing oral pronunciation of words, explaining their parts of speech, and offering a direct translation of words in Persian. Afterward, both groups attended the post-test of vocabulary at the end of the study. The result of the independence *t*-test revealed that the experimental group outperformed the control group. Kouhsarian et al. (2023) investigated the effect of collaborative learning on the motivation of EFL learners and their vocabulary learning. The findings indicated that engaging them in collaborative learning significantly improved their vocabulary learning.

The effects of applying vocabulary software on Iranian EFL learners' vocabulary learning were assessed in a quasi-experimental method by Mousavi and Nemati (2017). They used an English Language Test as a proficiency test to choose 54 intermediate-level students. The experimental group received instruction from the software version of the same book while the control group received instruction from the printed textbook in the conventional manner. The independent sample t-test and two paired sample tests were run to examine the results of this study. The results revealed that although both methods had a positive effect on learners' vocabulary learning, vocabulary learning programs done via CALL were more effective.

The impacts of web-based language (WBL) learning on learners' vocabulary enhancement were experimentally assessed by Hajebi et al. (2018), where all participants were IELTS students. The findings revealed a considerable difference between the experimental and control groups concerning vocabulary knowledge. WBL instruction improved EFL learners' vocabulary knowledge.

To assess the impact of Memrise on vocabulary learning, Fathi et al. (2018) conducted a study with 59 EFL learners. The learners were divided into two groups: 33 experimental and 26 control. The experimental group was exposed to vocabulary learning through the Memrise app, and the control group applied the conventional method. After 13 weeks, the results indicated that the students who applied Memrise strengthened their vocabulary more significantly than those who applied the conventional method.

The effects of CALL on the vocabulary learning of Iranian EFL learners were assessed by Johan and Wiharja (2022), who investigated whether using vocabulary.com as computer-assisted language learning (CALL) was proven to be effective in terms of vocabulary acquisition. Seventy-eight first-year undergraduate students in three different majors participated during a six-week period. The results of the pre- and post-tests showed that utilizing Vocabulary.com was effective in vocabulary acquisition for first-year undergraduate students.

The influence of CALL on Iranian intermediate learners' vocabulary learning was experimentally assessed by Enayati and Pourhosein Gilakjani (2020) in the Tell Me More (TEM) software environment. They applied the Preliminary English Test (PET) to measure the level of language proficiency, and the learners were placed into two control (30 EFL learners) and experimental groups (31 EFL learners) groups. All participants were given a pretest containing 80 choice items to assess their vocabulary knowledge before the treatment. Vocabulary teaching took 12 sessions with the same volumes in both groups. The experimental group was assigned to the TEM software, while the control group was assigned to the conventional method. After the sessions ended, a posttest of 65 multiple choice items was given to both the groups of learners to evaluate their vocabulary knowledge and the effectiveness of applying CALL. The data were analyzed by an independent sample *t*-test, where the scores from the pretest and posttest were involved. The results indicated that the experimental group outperformed the control group.

The effect of the practice model focus on form (FonF) on the vocabulary learning of L2 learners through CALL was examined by Soltani and Mohseni (2021). The study was run on 23 male and 39 female medical students by applying the English for Specific Purposes (ESP). Quizzes, podcasts, games, and videos were applied based on the FonF practice model for vocabulary learning. Participants were asked to select, practice, and memorize 12 (four nouns, four verbs, and four adjectives) from the audiovisual contents. The procedure of running one pretest and one posttest was similar to the available studies. According to the results, it could be concluded that practitioners of computer-assisted language learning can apply the FonF practice model as a technology-oriented pedagogical model to facilitate the L2 learners' intentional and incidental vocabulary learning abilities and enhance the integration of the emerging educational technologies in L2.

Research Questions and Hypotheses

The following four questions are formulated based on the advantages and disadvantages of the available approaches in this context:

(1) Does pair work interaction through CALL significantly improve Iranian EFL learners' vocabulary knowledge?
(2) Does small group work interaction through CALL significantly improve Iranian EFL learners' vocabulary knowledge?
(3) Does learning vocabulary through CALL improve students' vocabulary knowledge through individual-content interaction?

(4) Do different interaction patterns affect the vocabulary knowledge of students learning vocabulary through CALL?

Following the research questions, four hypotheses corresponding to the research questions were formulated:

$H_0$1: Pair work interaction through CALL did not lead to significant improvement of Iranian EFL learners' vocabulary knowledge.

$H_0$2: Small work interaction through CALL did not lead to significant improvement of Iranian EFL learners' vocabulary knowledge.

$H_0$3: Individual-content interaction through CALL did not lead to significant improvement of Iranian EFL Learner's vocabulary knowledge.

$H_0$4: Different interaction patterns did not affect the vocabulary knowledge of students learning vocabulary through CALL.

Research Gap and Rationale for the Current Study

As the literature review indicated, CALL and all its subsidiary tools have contributed to L2, in our case, vocabulary knowledge. Despite all the studies conducted so far, not many studies to date have conducted a comparative study measuring the effectiveness of CALL in vocabulary learning through three interaction patterns. This study seeks to investigate the effectiveness of three interaction patterns, i.e., pair work group (PWG), small workgroup (SWG), and individual work (IW) interactions, through Memrise and indicate how collaborative activity promotes learning vocabulary in this case, intermediate EFL learners.

METHOD

Participants

A total of 100 male and female intermediate-level Iranian EFL learners of English within the 15-20 age group from a private language institute in Isfahan were selected through convenience sampling. All participants are Farsi-speaking English learners who have been exposed to the English language for about three years. To assess their general proficiency level and to make them homogeneous, they took the Oxford Quick Placement Test (OQPT); participants with scores between 30 and 47 were selected as the intermediate level and assigned into four groups of three experimental and one control group in a random manner: pair-work interaction group (PWG), small interaction group (SG), individual content interaction group (IG), and control group (CG).

Materials and Instruments

The data-gathering tools applied here consist of the Oxford Quick Placement Test (OQPT), the Multiple-Choice Recognition Test of Vocabulary (MCRT) (a 40-item multiple-choice test), and Memrise (flashcards, multiple-choice tests, and typing quizzes).

English Proficiency Test

The Oxford Quick Placement Test (OQPT), consisting of 60 multiple-choice questions(36 testing structure and 24 testing vocabulary), was administered to ensure that the learners were truly homogeneous regarding their English proficiency level. The learners with scores ranging from 40 to 74 are considered intermediate. The reliability of this test was .85 in the present study.

The Multiple-Choice Recognition Test of Vocabulary

A 40-item multiple-choice vocabulary test (Appendix A) was developed to measure the participants' vocabulary knowledge before and after the treatment. The 40 items measure the vocabulary knowledge randomly selected from the book the four groups were to cover. The test contained the textbook's new words that the students would study during the upcoming semester; this test assures the researchers that the participants were not exposed to the terms before the treatment. This test was administered to both the experimental and control groups. The score of each learner in the test ranged from 0 to 40, with each correct answer receiving one mark for 45 minutes. The KR-21 reliability index of the pretest is (r = 0.73). Three experts in the field of SLA and language testing checked the test, made some suggestions regarding the wording of the items and the options, and confirmed its validity after the changes were made. The posttest resembled the pretest in its reshuffled form to eradicate the possibility of a test effect. The posttest reliability was reviewed through KR-21 (r = 0.77), and the experts reexamined its validity.

Memrise

Memrise Desktop software contains flashcards, multiple-choice tests, and typing quizzes applied with spaced repetition to help remember new words efficiently. This software is available at www.memrise.com and works through a simple sign-up process in an email. This software was first released in 2010 and has gained wide application (40 million people in 189 countries learn languages with it). The teacher (the first researcher in this study) worked on five lessons (each containing 12 words) of the *504 Essential Words in English,* which served as the supplementary material for the course, next to the regular English classroom materials. In each session, students practiced new vocabulary and reviewed the previous ones to enhance their vocabulary knowledge. Reviewed words in Memrise saved the words in long-term memory. This term relates to the count of the words reviewed according to the spaced repetition schedule. As students begin to practice the words, each word appears with its own pronunciation and definition. Suppose the students cram some words or have problems therein. In that case, some exercises appear again on the screen to be practiced. The environment of the application and a few of the exercises used therein are shown in Figure 1:

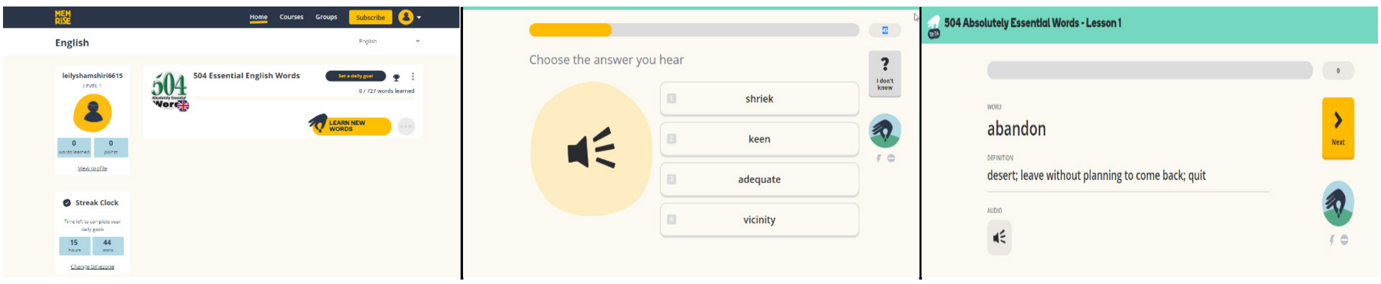
Procedure

The participants went through all the data-gathering steps: proficiency test, vocabulary knowledge pretest, and posttest. Once homogeneous learners were chosen based on the OQPT, they were randomly divided into three experimental groups and one control group. Before the study, these groups were informed about the purpose and the study procedure. They were assured of the confidentiality of the collected data. During the first session, the vocabulary pretest derived from the 504 Essential Words book was administered to measure their vocabulary knowledge before treatment. The vocabulary pretest administration and assessment of the students' vocabulary knowledge come next. The experimental groups used Memrise, a vocabulary learning program, in various ways to interact with one another. The experimental group of students downloaded the Memrise software program on their laptops and applied it for 20 minutes in each session. The remaining time was spent on their regular language learning activities. The treatment lasted 15 weeks. The control group learned vocabulary conventionally, with teachers' explanations and by memorizing vocabulary. The class met three times a week, each for 90 minutes. During each session, the researcher selected the target vocabulary items from the *504 Essential Words* book, explained them to the control learners, and then monitored the learners in the other three experimental groups. The procedure will be explained in detail as follows:

The three experimental groups each undertook the required vocabulary exercise, such as group pair-work interaction, small-group interaction, and individual work. In each session, four new vocabulary items with their definitions, antonyms, and synonyms were practiced in pairs, small groups, and individually in Memrise. Before the vocabulary instruction, the students in the experimental groups were provided with a 30-minute technical training session to learn how to use Memrise with its different functions in three classes with different interaction patterns. In this setup, in each session, students practice new vocabulary and review all previous words in Memrise to enhance their vocabulary knowledge. In all group work conditions, the learners were expected to correct one another, retrieve the word knowledge, and reconsider the meaning of the target word. After making sure they had access to the internet, the students in the experimental groups started working on the 504 essential words on Memrise and studying the level one words. The words appeared with their definition, synonym, and pronunciation. The correct pronunciation and definition were immediately presented for practice if they selected the wrong answer. In the pair group, the students shared one computer to learn new vocabulary by applying Memrise software. They were instructed to complete the exercises by sharing information through collaboration to choose the correct answer. The teacher evaluated the task at the end of each 20-minute session assigned to vocabulary learning. In the small group condition, all four members had to participate to practice vocabulary on the Memrise application on one computer, and no one was allowed to remain inactive. Finally, in the individual work conditions, each student encountered the Memrise content under the teacher's supervision. Regarding vocabulary instruction, the control group was directed through the conventional method (i.e., through the regular curriculum, which is lecturer-based, face-to-face training, and the teacher's explanation of the word's definition). Each session began with the introduction of four words and ended with an explanation of their synonyms and antonyms. The students were required to recite the vocabulary and focus on their meanings and spelling within the context. Finally, the students were supposed to rewrite the words and their meanings at home as homework. After the treatments, the researcher administered the vocabulary posttest to all experimental groups with different interaction patterns—pair work interaction, small group work interaction, and individual-content interaction—and one control group to

Figure 1

An illustration of the Memrise software



check whether the three types of interaction patterns with vocabulary learning software Memrise had a considerable effect on learners' vocabulary knowledge.

Data Analysis

A paired-samples t-test was used to look at the data and answer the first, second, and third research questions. It also looked at how the CALL program affected the students ' vocabulary learning through the three types of interactions. These tests compare the performances of a single group of learners on two occasions (i.e., the pretest and posttest). For the analysis of the fourth research question in relation to the differences among the different interaction patterns regarding their effects on the vocabulary knowledge of students learning vocabulary through CALL, a one-way ANCOVA was run to capture any potential differences among the four groups of participants.

RESULTS

Three separate paired-samples *t*-tests were run to answer the first three research questions. A paired-sample *t*-test was run to determine whether the pair-work group (PWG) learners improved when exposed to their treatment. The results for this *t*-test analysis are tabulated below.

As shown in Table 1, the mean scores and standard deviations of the pretest (M = 7.48, SD = 2.16) and posttest (M = 31.44, SD = 2.48) belong to the pair-work group learners. The learners in this group improved noticeably from pretest to posttest. To check whether this improvement is big enough to have statistical significance, the results of the paired-samples *t*-test are tabulated below and should be evaluated:

In reference to Table 2, the difference between the pretest and posttest scores of the learners in the pair-work group is statistically significant, t (24) = -91.70, p < .05 (2-tailed). The effect size for this difference, calculated through the *eta squared*equation is 0.997, indicating a considerable effect size based on Cohen (1988, as cited in Pallant, 2010), who believes that for this effect size, the values: 01 = small, .06 = moderate, and .14 = large must be reserved. The results for the comparison of the small-group-work (SWG) learners' pretest and posttest are tabulated below, respectively:

Does Small Group Work Interaction through CALL Significantly Improve Iranian EFL Learners' Vocabulary Knowledge?

As evident in Table 3 for SGW learners, the posttest mean score (M = 30.20, SD = 3.24) is of higher significance than the pretest mean score (M = 7.08, SD = 2.32), indicating that the learners gained proper improvement from the pretest to the posttest of vocabulary. Whether this difference between the pretest and posttest scores has statistical significance can be determined according to the content of Table 4.

In Table 4, there exists a statistically significant difference between the pretest and posttest scores of the learners in the SGW condition, t(24) = -69.37, p <0.05 (2-tailed). The magnitude of the effect, calculated through the *eta squared* equation, is 0.995, indicating a considerable effect of the treatment applied to the SGW condition. The comparison of the pretest and posttest scores in the individual-work group (IWG) is observed in Table 4.

Table 1

Results of Descriptive Statistics for the Pretest and Posttest of the PWG

Tests	Mean	*N*	Std. Deviation	Std. Error Mean
PWG Pretest	7.48	25	2.16	0.43
PWG Posttest	31.44	25	2.48	0.49

Note. PWG=pair-work group

Table 2

Results of Paired-Samples t-Test for the Pretest and Posttest of the PWG

	Paired Differences					*t*	*df*	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
PWG Pretest PWGposttes	-23.96	1.30	0.26	-24.49	-23.42	-91.70	24	0.000

Table 3

Results of Descriptive Statistics for the Pretest and Posttest of the SGW

Tests	Mean	*N*	Std. Deviation	Std. Error Mean
SGW Pretest	7.08	25	2.32	.46
SGW Posttest	30.20	25	3.24	.64

Note. SGW= small-group-work

Table 4

Results of Paired-Samples t-Test for the Pretest and Posttest of the SWG

	Paired Differences					*t*	*df*	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
SGW Pretest – SGW Posttest	-23.12	1.66	.33	-23.80	-22.43	-69.37	24	0.000

Table 5

Results of Descriptive Statistics for the Pretest and Posttest of the IWG

Tests	Mean	*N*	Std. Deviation	Std. Error Mean
IWG Pretest	6.52	25	2.29	.45
IWG Posttest	24.88	25	3.04	.60

Note. IWG= individual work group

Table 6

Results of the Paired-Samples t-Test for the Pretest and Posttest of the IWG

	Paired Differences					*t*	*df*	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
IWG Pretest IWG Posttest	-18.36	1.72	.34	-19.07	-17.64	-53.08	24	.000

Does Learning Vocabulary through CALL Improve Students' Vocabulary Knowledge through Individual-Content Interaction?

Learners' vocabulary knowledge in the IWG improved considerably, and it was determined whether the difference between the pretest and posttest scores in the IWG condition had statistical significance.

As shown in Table 6, the difference between the pretest and posttest scores of the learners in the IWG condition is of statistical significance, t (24) = -53.08, $p < .05$ (2-tailed). The effect size for this condition is 0.991, indicating a significant effect.

After observing that the three experimental groups' mean scores improved significantly from pretest to posttest, it is worth answering the question: Which group benefited more from the instructions provided, and whether there exists a difference among the four groups?

A one-way ANCOVA was run to answer the fourth research question, the results of which are tabulated below:

Do Different Interaction Patterns Affect the Vocabulary Knowledge of Students Learning Vocabulary through CALL?

In this table, the posttest mean scores of the PWG (M = 31.4), SWG (M = 30.20), IWG (M = 24.88), and control group (M = 20.76) indicate that the PWG and SWG learners gained higher mean scores than the other two groups. Whether the differences among these four groups have statistical significance is determined in Table 8.

In the Sig. column, the *p*-value in the row labeled Groups is lower than the alpha level of significance (p <.05), indicating that the differences among the four groups on the posttest have statistical significance. The partial *eta squared* value (0.87) indicates that the magnitude of the difference is large. The Scheffe post-hoc test in Table 9 should be checked to determine the exact differences among these groups.

As shown in Table 9, the difference between the learners in the PWG and SGW conditions is not statistically significant, although the PWG learners outperformed the SGW learners. Statistically, significant differences were found between the mean scores of the learners in the PWG and IWG; PWG and control group; SGW and IWG group; SGW and control group; and IWG and control group (p<.05). These differences indicate the effectiveness and superiority of CALL-based interactive activities over conventional instruction. It was revealed that pair work was (although not significantly) more influential among the three interaction patterns than small group work. It suggests that these two types of interventions are significantly more effective than individual interaction, which, in turn, is significantly more effective than conventional instruction.

DISCUSSION

Three types of interaction were used to look at and compare the effects of CALL-based instruction on the vocabulary learning of intermediate Iranian English as a foreign language (EFL) student: pair work, small groups, and individual content interaction. The results revealed that the experimental groups outperformed the control group. The success of the experimental groups in terms of vocabulary knowledge achievement was explained by answering the following questions:

The first research question was formulated to determine whether pair-work interaction through CALL would be effective in L2 vocabulary learning. The results indicate that pair-work interaction through CALL significantly improved the learner's vocabulary knowledge, suggesting that computer software can be applied together with conventional techniques to foster intermediate EFL learners' vocabulary competence. These results reveal the advantages of collaborative activities in this study for the L2 learners' development of vocabulary knowledge. Students interacted with their peers to practice the CALL software program and learn new vocabulary.

Table 7

Descriptive Statistics for the Posttest Scores of the Four Groups

Groups	Mean	Std. Deviation	*N*
PWG	31.44	2.484	25
SGW	30.20	3.240	25
IWG	24.88	3.045	25
CG	20.76	2.817	25
Total	26.82	5.168	100

Table 8

Results of One-way ANCOVA for Comparing the Posttest Scores of the EG and CG

Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Squared
Corrected Model	2422.15	4	605.53	258.42	.000	.91
Intercept	3614.82	1	3614.82	1542.68	.000	.94
Pretest	590.75	1	590.75	252.11	.000	.72
Groups	1623.63	3	541.21	230.97	.000	.87
Error	222.60	95	2.34	_	_	_
Total	74576.0	100	_	_	_	_
Corrected Total	2644.76	99	_	_	_	_

Note. EG=experimental group; CG=control group

Table 9

Scheffe Post Hoc Test Results for Comparing the Learners' Posttest Scores

Groups	Groups	Mean Difference	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
PWG	SG	.81	.43	.38	-.35	1.98
PWG	IWG	5.53	.43	.00	4.35	6.71
PWG	CG	10.08	.43	.00	8.91	11.25
SG	IWG	4.72	.43	.00	3.55	5.89
SG	CG	9.27	.43	.00	8.10	10.43
IWG	CG	4.54	.43	.00	3.37	5.71

Borokhovski et al. (2012) found that peer-to-peer interaction has the most significant effect on achievement. Zarei and Sahami Gilani (2013) examined the effects of selected collaborative techniques on second language (L2) vocabulary. The findings revealed that collaborative learning improved vocabulary learning. The same holds for the findings by Bernard et al. (2009, p. 315), who assessed the effectiveness of student-student interaction treatments through a meta-analysis of the specific literature. The post hoc analysis revealed that student-student interaction has the highest effect on achievement outcomes, especially compared to student-teacher interaction. The findings are also compatible with those of Johan and Wiharja (2022), who investigated Vocabulary.com, as Computer-Assisted Language Learning (CALL) is effective in terms of vocabulary acquisition.

The current study results are incompatible with Kuo et al. (2014), who found that learner-content interaction was the most robust interaction where the students were satisfied. However, most studies reviewed here revealed that interaction patterns improved vocabulary development, but not in a CALL context. Vygotsky's Socio-Cultural Theory (1978, 1986) theorized that social and collaborative interaction contribute highly to language learning. Pair work allows learners to interact with their peers, which improves their learning abilities. Lewis (1997) and Hill (1997) pointed out that pair work establishes an environment where learners can practice the language by communicating, reducing anxiety, and increasing classroom participation.

The second research question was formulated to determine whether small group interaction through CALL-based instruction would be effective in L2 vocabulary learning for EFL learners. The findings indicate that small group interaction through CALL-based activities significantly improved their L2 vocabulary knowledge, given that the participants had little knowledge of the target words before the treatment. These results indicate the benefits of collaborative activities in this study for the L2 learners' development of vocabulary knowledge. Students interacted with other group members to read a text and encounter new vocabulary.

The findings of the present research correspond with those of Kouhsarian et al. (2023) and Mirzaian (2020), who assessed learning vocabulary in EFL vocabulary learning collaborative groups, compared the results with the conventional method, and found that group work significantly outperformed individual work in vocabulary learning. Laufer and Hulstijin (2001) indicated that learning the different aspects of vocabulary knowledge through error correction, explanation, suggestion, and resource sharing would be more effective in pairs than in group work. Students in the short term attained higher scores through collaborative learning, pair work, and group work than individual learning. To them, learners in group work are more interactive in what they do than in individual setups. The same holds for Tamjid and Moghadam (2012), who ran an experimental study to assess the Narsis software's effects on Iranian intermediate EFL learners' vocabulary acquisition. Their results indicate that the experimental group outperforms the control group, and through interviews, it was found that the participants in the experimental group had positive attitudes towards Narsis software.

The influence of CALL on Iranian intermediate learners' vocabulary learning was experimentally assessed by Enayati and Gilakjani (2020) in the Tell Me More (TEM) software environment. In line with the findings of the current study, these studies indicated that applying the Tell Me More (TEM) software highly contributes to vocabulary learning in L2. Khalifehkari and Gilakjani (2022) investigated the effect of CALL on intermediate EFL learners' vocabulary learning. The result of the independence *t*-test revealed that the experimental group outperformed the control group.

The results do not correspond with the results obtained by Aist's (2002) study, where learners used both computer-assisted and human-assisted oral reading to learn vocabulary. The learners' performance was not significantly different when they used the computer program and conventional method to assist in learning word meanings in reading. Most studies in his article indicate that CALL users outperformed those who did not use it. CALL technology allows students to access a virtual learning environment where they can use several English software programs to learn different languages and provide immediate feedback for learners. According to Lan et al. (2009), CALL was applied as an alternative to examining students' learning progress.

The third research question was addressed to determine whether the individual work through CALL would be practical for vocabulary learning. The results indicate that the individual interaction group, who learned English vocabulary through CALL-based instruction, outperformed the control group in the vocabulary posttest. These findings agree with those of Mousavi and Nemati (2017), who assessed the effects of CALL on Iranian EFL learners' vocabulary learning. The control group was taught the vocabulary in the conventional way through the printed textbook, while the experimental group was instructed by the software version of the same book. The results of an independent sample t-test revealed that electronic vocabulary learning programs were more effective.

The results obtained in the current research do not correspond with those of Huong (2006), Mirzaian (2020), and Ariffin (2021), who found the advantages of collaborative learning vs. individual learning for L2 vocabulary learners. The experimental and control groups exhibited lower performance on the vocabulary test in the delayed posttest than in the immediate posttest, indicating that the effect of instructions was not retained over time; thus, another topic of concern in this context.

The fourth research question was addressed to determine whether different interaction patterns affect students' vocabulary acquisition differently through CALL. The findings indicate the effectiveness of CALL-based interventions over conventional instruction. The control group followed the usual pattern of student-instructor interaction. Among the three interaction patterns, pair work was superior to group work interaction, which was, in turn, more effective than individual-content interaction. The results obtained here correspond with those of Laufer and Hulstijin (2001), in which students in the short term attained higher scores through collaborative learning, pair work, and group work, respectively. Vygotsky (1978), who contends that collaborative learning is more effective when learners are in their proximal development zone, may support the findings of this study. Interaction is crucial in collaborative learning between the learners and the learning group to promote mutual progress (Hu, 2001; Schunk, 1996).

CONCLUSION

Technological applications, particularly CALL, have recently encouraged some researchers to examine their effects on the vocabulary acquisition of EFL learners. This study is concerned with CALL's integration into vocabulary learning and the effects of interaction patterns examining and determing whether they influence the vocabulary knowledge of EFL learners. The results confirmed that call-based instruction integrated with pair work and group work interactions could significantly enhance EFL learners' English vocabulary knowledge. Collaborative learning is a more effective pattern to be applied by second-language learners. It makes vocabulary learning enjoyable, promotes students' motivation and attitude toward attending the classes, and makes the learning process more meaningful and intriguing.

Significant differences exist between this study and the mentioned studies in the literature review, applying the three interaction patterns (pair-work interaction, small-group-work interaction, and individual-content interaction) and CALL intervention for vocabulary learning. Many studies are focused on assessing the effects of interaction patterns and/or CALL on different language skills, especially vocabulary development, but not with the patterns of interaction applied in this study. Call-based software in this study allows students to learn new words and expand their vocabulary knowledge. Students develop their cognition by interacting with each other in the class and participating in collaborative tasks, like co-constructing knowledge. The findings indicate that, to date, the contribution of CALL has been high in this context.

Teachers and students can adopt other software programs for improving vocabulary learning. Applying newly developed devices (software) for different English skills and subskills would enhance L2 learning and, consequently, have a broader scope in this field. For this purpose, selecting more English learning institutions, schools, and universities with a broader study scope is essential to obtaining better results. By resorting to the findings here, students are advised to take advantage of CALL-based facilities and participate in interactive activities.

The limitation of this study is due to the time constraints, where the participants received treatments for only one term, and the number of participants was limited to 100 EFL learners, making it difficult to generalize the theme in other contexts. It may be argued that some of these treatments may require a longer time to take effect or might have long-term effects. Their effects may not be evident immediately after instruction. In this study, other mediating variables like gender and attitude, the age of the participants, individual differences, and the different context of the study, which can affect the learners' perception of Memrise and technology in the four groups, are of no concern. These shortcomings can be the subject of future research, and where possible, new software may be provided. Remember that all these effects lead to innovation in teaching and learning.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Fatemeh Shamshiri: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

Sajad Shafiee: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

Fariba Rahimi: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

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APPENDIX A

A. Choose the best answer.

1. This advertisement is a............example of their marketing strategy.
   a. typical b. scared c. annual d. jealous

2. She finally managed to ....him to go out for dinner with her.
   a. play b. persuade c. persist d. blend

3. A careful .... of fine products will result in delicious food.
   a. blend b. burn c. fire d. work

4. It is difficult to .... what the long-term effects of the accident will be.
   a. forbid b. buy c. predict d. make

5. The .... number of students we need to run the course is fifteen.
   a. minimum b. annual c. keen d. hard

6. The ....materials for baking cake are flour and sugar.
   a. visible b. essential c. expensive d. humid

7. Sara showed a .... for acting at an early age.
   a. tradition b. tact c. talent d. bachelor

8. The ....was found by children playing in the woods.
   a. corpse b. employee c. topic d. debate

9. The path was ....by long grass.
   a. reclined b. explored c. tempted d. concealed

10. Many wild animals ....in the woods.
    a. predict b. blend c. inhabit d. persuade

11. It did not matter that her ....was only five dollars.
    a. hardship b. burden c. wage d. campus

12. There was something ......about Mr scott's death.
    a. sinister b. popular c. thorough d. jealous

13. When the weather is so ...., she sometimes stays in bed all day.
    a. keen b. dismal c. rural d. unusual

14. Her mother puts her own life in ....to rescue her daughter.
a. burden b. wholesale c. oath d. peril

15. In winter my fingers become so .... that I can hardly write.
    a. numb b. enormous c. popular d. moist

16. The game had to be .... due to rainy weather.
    a. keen b. abandoned c. expensive d. essential

17. At the age of 16, Ali bore the ....of providing of his family.
    a. beret b. burden c. border d. band

18. My father never hurts anyone's feeling because he always uses ....
a. wager b. campus c. tact d. client

19. Servicemen have to swear an ......of loyalty to their country.
a. oath b. data c. approach d. theory

20. Jack is so ....that he always gives up his subway seat to a woman.
a. jealous b. gallant c. minimum d. humid

21. Sara was completely exhausted by the .... heat.
a. unaccustomed b. visible c. gallant d. keen

22. She ....her employers of thousands of pounds.
a. defrauded b. reformed c. assembled d. explored

23. "Keep away from me" she ....
a. shrieked b. probed c. evaded d. neglected

24. The doctor gave him a .... check-up.
a. enormous b. thorough c. popular d. comprehensive

25. The .... price of juice is six cents a quart lower than retail.
a. wholesale b. vapor c. burden d. topic

26. He was .... on the lounge chair which had been his cradle during his trip through space.
a. descending b. reclining c. vanishing d. persuading

27. The .... of his breath feathered in a trail behind him as he moved through the cold bushes towards the stream.
a. vapor b. majority c. client d. data

28. When the .... fell down the wall, everyone lived happily ever after.
a. wager b. annual c. villain d. talent

29. Swimming helps to get the blood ....through the muscles.
a. utilizing b. circulating c. producing d. insisting

30. My ring was here a minute ago but now it's ....
a. vanished b. reclined c. works out d. permitted

31. In some languages you may be able to .... material from grammar books for these lists.
a. qualify b. circulate c. utilize d. plan for

B. chose the correct word for each definition.

32. ...., Tell beforehand
a) utilize b) vanish c) predict d) probe

33. .... once a year; something that appears yearly or lasts for a year.
a) sinister b) numb c) vacant d) annual

34. ...., able to be seen
a) wager b) eliminate c) visible d) jealous

35. .... search in to, examine thoroughly, investigate
a) probe b) reform c) neglect d) decieve

36....... think out; plan; invent
a) devise b) defraud c) detect d) deceive

37............, Liked by most people
a) popular b) enormous c) humid d) keen

38. ....closely packed together, thick
a) dense b) rural c) expensive d) frigid

39.............try to get someone to do something; invite
a) tempt b) utilize c) inhabit d) conceal

40............ make someone believed as true something that is false; mislead
a) Deceive b) Encourage c) Persuade d) pretend

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Writing with AI: University Students' Use of ChatGPT

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ABSTRACT

Background: ChatGPT, a chatbot based on a large language model, captured global attention toward the end of 2022. With its potential to generate comprehensive texts of a variety of genres based on a string of straightforward prompts, it was soon perceived as a threat by many in various fields, including – and in particular – education. Schools across the world began banning its use as instructors started to receive suspiciously well-written essays and assignments from their students.

Purpose: This study aimed to investigate the prevalence of use of ChatGPT among university students for written assignments, explore the ways students utilize the tool, and examine students' perspectives on the ethical aspects of its use.

Method: An online questionnaire was designed to collect data from 201 students from private and public universities in Croatia.

Results: The results show that more than half of the participants use ChatGPT for written assignments, that most use it to generate ideas, while many use it to summarize, paraphrase, proofread, but also to write a part of the assignment for them. According to the participants, the most ethically acceptable use of ChatGPT is for generating ideas, while other uses are perceived by many as being unethical; this, however, has not prevented some students from engaging in behaviors they deem unethical.

Conclusion: We conclude that universities and instructors need to take a decisive stand on artificial intelligence in education and provide clear guidelines to students regarding the ethical use of ChatGPT and emerging technologies.

KEYWORDS

ChatGPT, academic honesty, academic integrity, plagiarism, ethics, artificial intelligence

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INTRODUCTION

ChatGPT, a chatbot based on a large language model, was developed by the company OpenAI and was released to the public in November 2022. It demonstrated unparalleled potential to write full texts of a variety of genres in a way a human would, based on a string of straightforward prompts. Since then, numerous authors in the media have written about the dangers of ChatGPT. For example, there are privacy concerns because a large language model that ChatGPT was built on was trained on hundreds of billions of words from the internet, including personal information and copyrighted material, obtained without consent or compensation[1]. Privacy is not a concern solely from the aspect of what ChatGPT is built on, but from the aspect of the users' input as well; for example, in March 2023, Italy temporarily banned ChatGPT because of concerns regarding the collection of data from Italian ChatGPT users[2]. Other authors wrote

[1] Gal, U. (2023, February 10). ChatGPT is a data privacy nightmare. If you've ever posted online, you ought to be concerned. *The Conversation*. https://theconversation.com/chatgpt-is-a-data-privacy-nightmare-if-youve-ever-posted-online-you-ought-to-be-concerned-199283

[2] Kim, J. (2023, March 31). ChatGPT is temporarily banned in Italy amid an investigation into data collection. *NPR.* https://www.npr.org/2023/03/31/1167491843/chatgpt-italy-ban-openai-data-collection-ai

of ChatGPT "causing untold chaos"[3], expressed concerns over its "dark side", urging businesses to prepare for the AI takeover[4], and warned of the "dark risk" of large language models and the consequences for people when AI-written text becomes indistinguishable from the human-written text[5]. Furthermore, there are those who saw the introduction of AI-powered tools as a threat to the human creative process, considering that a text or a picture can be created through the use of a prompt rather than the laborious yet rewarding process of writing and painting[6]. Nature's editors (Tools such as ChatGPT..., 2023) pointed out that "ChatGPT can write presentable student essays, summarize research papers, answer questions well enough to pass medical exams and generate helpful computer code". Indeed, some authors have gone so far as to proclaim the college essay dead because of students' use of AI-powered technology to produce essays[7].

However, other authors remained confident that ChatGPT will not significantly harm education. There are those who are optimistic that ChatGPT will change education for the better, although they find panic, which resulted in schools across the world banning ChatGPT, understandable as an initial reaction of the education sector because "teachers have been thrown into a radical new experiment"[8]. Therefore, authors call for a shift in focus – from teaching writing to developing critical reading and editing skills[9]. One instructor is convinced that ChatGPT cannot replace teachers of writing who teach their students that writing is about establishing relationships, which is something ChatGPT cannot do[10] (we would add, yet). Finally, an author who tested GPT-3 before it was widely available as ChatGPT, concluded that educators will need to rethink teaching and assessment rather than accelerate "an ongoing arms race between increasingly sophisticated fraudsters and fraud detectors"[11]. Indeed, the widespread panic in the education sector resulted in several companies offering or upgrading their software to detect AI-written text, such as the well-known Turnitin, ZeroGPT, and the OpenAI's own AI Text Classifier. However, none of these solutions are considered a hundred percent accurate, and false positives may occur[12], even though both Turnitin and ZeroGPT claim 98% accuracy[13, 14]. Our anecdotal evidence shows that the percentage must be significantly lower as Turnitin failed to detect any AI-produced text in six student papers written entirely by ChatGPT in April 2023.

While optimism regarding ChatGPT might be warranted, at this point it needs to be highlighted that ChatGPT (v3.5) has certain faults that impact the quality of the work it produces. In small print on the bottom of the tool's interface, it reads, "ChatGPT may produce inaccurate information about people, places, or facts"[15]. Indeed, ChatGPT is known to fabricate sources (or as it is known in the jargon, "hallucinate") when asked to produce in-text citations and references as it in-

[3] Nolan, B. (2023, January 28). ChatGPT has only been around for 2 months and is causing untold chaos. *Business Insider*. https://www.businessinsider.com/chatgpt-ai-chaos-openia-google-creatives-academics-2023-1

[4] Angel, B. (2023, April 1). The dark side of ChatGPT: Employees & businesses need to prepare now. *Entrepreneur*. https://www.entrepreneur.com/science-technology/the-dark-side-of-chatgpt-employees-businesses-need-to/444225

[5] Marcus, G. (2022, December 29). The dark risk of large language models. *Wired*. https://www.wired.com/story/large-language-models-artificial-intelligence/

[6] Eisikovits, N., & Stubbs, A. (2023, January 12). ChatGPT, DALL-E 2 and the collapse of the creative process. *The Conversation*. https://theconversation.com/chatgpt-dall-e-2-and-the-collapse-of-the-creative-process-196461

[7] Marche, S. (2022, December 6). The college essay is dead. *The Atlantic*. https://www.theatlantic.com/technology/archive/2022/12/chatgpt-ai-writing-college-student-essays/672371/

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[9] Rigolino, R. E. (2023, January 31). With ChatGPT, we're all editors now. *Inside Higher Ed.* https://www.insidehighered.com/views/2023/01/31/chatgpt-we-must-teach-students-be-editors-opinion

[10] Malesic, J. (2023, February 9). What ChatGPT can't teach my writing students. *The Atlantic*. https://www.theatlantic.com/ideas/archive/2023/02/writing-education-language-empathy-ai-chatgpt-age/672999/

[11] Sharples, M. (2022, May 17). New AI tools that can write student essays require educators to rethink teaching and assessment. *London School of Economics and Political Science*. https://blogs.lse.ac.uk/impactofsocialsciences/2022/05/17/new-ai-tools-that-can-write-student-essays-require-educators-to-rethink-teaching-and-assessment

[12] Fowler, G. A. (2023, April 3). We tested a new ChatGPT-detector for teachers. It flagged an innocent student. *The Washington Post*. https://www.washingtonpost.com/technology/2023/04/01/chatgpt-cheating-detection-turnitin/

[13] AI Text Classifier. (n.d.). *OpenAI*. https://platform.openai.com/ai-text-classifier

[14] Alimardani, A., & Jane, E. A. (2023, February 19). We pitted ChatGPT against tools for detecting AI-written text, and the results are troubling. *The Conversation*. https://theconversation.com/we-pitted-chatgpt-against-tools-for-detecting-ai-written-text-and-the-results-are-troubling-199774

[15] ChatGPT. (n.d.). *OpenAI*. https://chat.openai.com/

vents authors and article titles[16, 17], which one of the authors experienced as well when they prompted ChatGPT to produce a text on a niche as well as a very familiar topic. Upon scrutiny, it turned out the authors did not exist, nor did the articles. Obviously, an uncritical or uninformed user might misuse ChatGPT by failing to detect "inaccurate information about people, places, or facts", which makes it a less-than-ideal tool for university students and their needs.

ChatGPT is certainly not the only tool students have at their disposal if they want to take a shortcut in producing written work for college. QuillBot, which advertises as an online paraphrasing tool, has been around for some time. "Traditional" forms of academic dishonesty remain popular: students engage in contract cheating and buy papers from paper mills (e.g., Hill et al., 2021; Rigby et al., 2015; Walker & Townley, 2012) and use other people's work without crediting the original authors. However, none of these have shown to be as disruptive to education, and academic honesty in particular, as ChatGPT. Therefore, our aim was to investigate the use of ChatGPT among university students in Croatia in order to find answers to the following research questions:

RQ1. How prevalent is the use of ChatGPT among university students?

RQ2. How do university students use ChatGPT?

RQ3. What are the perceptions of university students regarding the ethical aspects of using ChatGPT?

LITERATURE REVIEW

Considering the recency of the topic, little is yet known about university students' use of ChatGPT. Nonetheless, several studies have been published, and we summarize their findings below as they relate to our research. However, since unethical use of the AI-powered chatbot in university can surely be viewed as academic dishonesty, we first address the findings from studies on university students' academic dishonesty, in particular in the Croatian context, as this will certainly aid us in interpreting some of the results from our research carried out on Croatian university students.

Academic Dishonesty

More than thirty years ago, Davis et al. (1992) noted that academic dishonesty has been "a perennial problem in higher education" and that "scholarly reports of academic dishonesty have appeared for more than 60 years", with the research effort intensifying in the past twenty years (p. 16). Their research on a sample of six thousand students showed that 76% have admitted to cheating, while 90% of those same participants indicated that they believe it is wrong to cheat. The authors concluded that participants demonstrated "a diminishing sense of academic integrity" (p. 19). This age-old problem that spans countries and contexts, for example, Australia (Brimble & Stevenson-Clarke, 2005), Canada (Eaton & Christensen Huges, 2022), India (Anitha & Sundaram, 2021), Romania (Ives et al., 2017), Russia, Ukraine, Lithuania, Armenia (Denisova-Schmidt, 2020), has not spared Croatia either. On the contrary, cheating appears to be a widespread, and even more worryingly, a widely acceptable phenomenon in Croatia. While academic honesty is not an unknown concept in Croatia, it exists only at a proclaimed, ethereal level, without practical applications or actual implications. Indeed, an international survey of educators and university students[18] found that Croatian students and instructors believe cheating is a part of Croatian culture and is thus difficult to change. According to the same report, Croatia ranked 19th among 33 participating European countries in view of academic integrity maturity. The report also cites cases of prominent Croatian politicians who were caught plagiarizing yet experienced no consequences for their dishonest acts. That Croatia is a fertile ground for academic dishonesty was confirmed in several studies carried out in the past twenty years. What these studies (e.g., Bilić-Zulle et al., 2005; Dukić, 2022; Kukolja Taradi et al., 2016; Majstorović, 2016; Petrak & Bartolac, 2014; Pupovac et al., 2010; Štambuk et al., 2015) in the Croatian context show is that Croatian university students understand that academic dishonesty, including plagiarism, is wrong, yet many of them do not consider it an important matter, and many of them, between 58% and 97%, engaged in some form of academic dishonesty. The studies also show that Croatian university instructors are aware of the problem yet seem to be rather passive about it. It is against this backdrop that we investigated the use of ChatGPT among university students in Croatia.

University Students' Use of ChatGPT

Although there is a scarcity of research on students' use of ChatGPT, several studies on the topic, carried out in a variety of contexts, have been published recently.

For example, Singh et al. (2023) carried out a study using a 12-item questionnaire on 430 university students of computer science in the United Kingdom. The results showed that

16 Hillier, M. (2023, February 20). Why does ChatGPT generate fake references? *TECHE*. https://teche.mq.edu.au/2023/02/why-does-chatgpt-generate-fake-references/

17 Welborn, A. (2023, March 9). ChatGPT and fake citations. *Duke University Library*. https://blogs.library.duke.edu/blog/2023/03/09/chatgpt-and-fake-citations/

18 What these studies ETINED. (2017). *South East European Project on Policies for Academic Integrity*. Final Report. http://www.plagiarism.cz/seeppai/Final-report_SEEPPAI.pdf

although familiar with the tool, students reported not using it on a regular basis in their learning activities, possibly because they were concerned about potential misuse, but also because at the time of the study, students did not possess an advanced knowledge of the tool. The authors concluded that guidelines are needed that would steer students toward using ChatGPT “positively”.

Furthermore, Jowarder (2023) used semi-structured interviews to gain insight into the levels of “awareness, adoption, perceived usefulness, and impact of ChatGPT” on 200 undergraduate social science students from the United States. The author found that most students were aware of the tool and that most had used it in their studies. Students recognized its usefulness, in particular because it is easy to use and because it helps them to clarify difficult concepts, find relevant study materials, and do research for their coursework. Apart from usefulness as a factor that affected students’ use, the study found that the participants’ use of ChatGPT was influenced by social factors, such as peers’ recommendations to use the tool. The author noted that many students had reported using the tool to submit written assignments but were not caught, primarily because plagiarism detection tools at the time had not been able to detect AI-generated texts. Hence, the author concluded that the tool cannot be a substitute for critical thinking and independent learning as relying solely on ChatGPT for academic work could harm students’ intellectual growth.

Ngo (2023) surveyed 200 Vietnamese students via an online questionnaire and interviewed 30 of the students to examine their perceptions of ChatGPT. The study found that students were positive about using ChatGPT in their learning, highlighting its simplicity of use and convenience. The tool helped students to save time, obtain information, and receive feedback. However, the participants showed to also be aware of the negative aspects of ChatGPT, in particular the questionable reliability of information and sources. The author concluded that guidelines on ChatGPT use are needed and that academic integrity should be promoted among students to “ensure ethical uses of ChatGPT in academic context” (p. 15).

Finally, Yilmaz & Karaoglan Yilmaz (2023) employed a questionnaire to examine the perspectives of 41 undergraduate students of computer science in Turkey in view of their use of ChatGPT in programming. The participants noted several advantages of using the tool, such as obtaining fast and mostly accurate responses, enhancing thinking skills, receiving help with debugging, and having a positive impact on self-confidence. However, several disadvantages were observed as well. Students felt that using ChatGPT could lead to them getting used to laziness. In addition, they were concerned about the tool not being able to answer certain prompts and about receiving incomplete or incorrect information. Nonetheless, the authors concluded that incorporating ChatGPT in programming courses is the right approach due to the predominantly positive influence; however, not without considering “the ethical appropriateness of results generated by generative AI tools like ChatGPT”.

The studies above found that university students in different countries and contexts use ChatGPT in their education and are largely aware of both the advantages and disadvantages. The authors of the studies, based on their findings, called for clear guidelines regarding ChatGPT use in the academic context. Since none of the studies above have thoroughly addressed the variety of ways students use ChatGPT or the ethical aspects of its use, we hope our findings will contribute to addressing the current gap in research.

METHOD

We opted to conduct a quantitative study on university students using an online questionnaire as the primary instrument. This choice was driven by several factors. Firstly, an online survey offered a practical and efficient means of data collection, and the structured format of the questionnaire ensured standardized responses, enhancing the reliability and comparability of the gathered data. The adoption of a non-probability convenience sampling method was driven by practical considerations and the nature of the research objectives. Convenience sampling allowed for the inclusion of participants readily accessible through online platforms and in-class settings within the specified time frame. The distribution strategy, encompassing both social media channels and in-class dissemination over a four-week period, was designed to maximize participation and capture a broad range of perspectives. The predetermined closure of the survey upon reaching a certain number of responses ensured a manageable dataset for analysis within the study’s scope. The chosen distribution channels and timeline were thus guided by a balance between reach, practicality, and the study’s exploratory nature.

Instrument

The online questionnaire was developed in Google Forms and consisted of eighteen items across four sections. The first two sections had one item each, with the first one asking the participants to confirm they were university students. Guided by our research questions on ChatGPT use among university students, we wanted to make sure only students participate in the survey. Hence, in case of a positive answer, the participants could proceed to the next section and next item, which required them to state whether they have heard about ChatGPT. Considering the research questions, we determined that students who had not heard about ChatGPT could not contribute to our survey, so we decided to stop such students from participating. Thus, in case of a positive answer, they could proceed to the remainder of the survey. If the participants provided a negative answer on either of the two items above, they were taken to the end of the survey without an option to see the other sections and thus complete the survey.

The third section contained eight items and was aimed at collecting general, background information about the participants. Here, we wanted to note the participants' gender, year level, institution type (private or public), academic performance, familiarity with the academic honesty policy at their institution, experience with plagiarism (a person or software writing an assignment for them), experience with other types of academic dishonesty, and whether they had ever been accused of academic dishonesty.

The final, fourth section, included nine items aimed at exploring the participants' experience with ChatGPT. In this part, we wanted to find out whether their instructors mentioned ChatGPT in class, what the instructors' general attitudes toward ChatGPT are, whether participants used ChatGPT for a written assignment, whether they shared that information with their instructors, whether instructors had detected ChatGPT use, what the participants' opinion on the helpfulness of ChatGPT is, and what their opinion on ethical uses of ChatGPT is. Regarding the latter item that contains six potential uses of ChatGPT (e.g., generating ideas, writing parts of the assignment, paraphrasing, etc.), they were developed based on researchers' discussions with non-participating students on their actual use of ChatGPT.

The last item in the category was an optional open-ended question to provide further comment.

In designing all of the items, we were primarily guided by our three research questions.

Sample

We used a non-probability convenience sampling method to reach potential participants of the survey. While there were 202 responses to the survey, one participant was not a university student, and another 31 stated that they have not heard about ChatGPT, which left 170 participants who completed the entire survey.

There were 54.7% female and 42.9% male participants, one non-binary participant, and three who preferred not to state their gender, which makes for a balanced sample gender-wise. The majority of participants were in their second and first year of studies (Figure 1).

Most participants came from private (82.9%) as opposed to public (17.1%) universities. Considering the sensitivity of the topic, we wanted to ensure as greater a level of anonymity to the participants as possible, which is why we did not require them to state their specific institutions.

Almost half of the participants reported doing well academically by stating that they generally receive As and Bs (Figure 2). None of the participants selected that they generally receive Ds and Fs.

Procedure

The questionnaire was distributed via social media and in classes during four weeks in March 2023. Upon reaching 202 responses, the survey was closed, and data analysis commenced.

RESULTS

To better understand our participants' background, we inquired about their familiarity with academic honesty policies at their universities. As the results show, a vast number of participants are either familiar or quite familiar with the academic honesty policy at their university (Figure 3).

Figure 1

Participants' Year Level

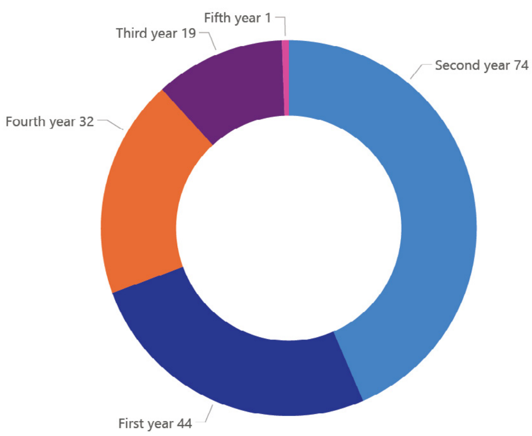
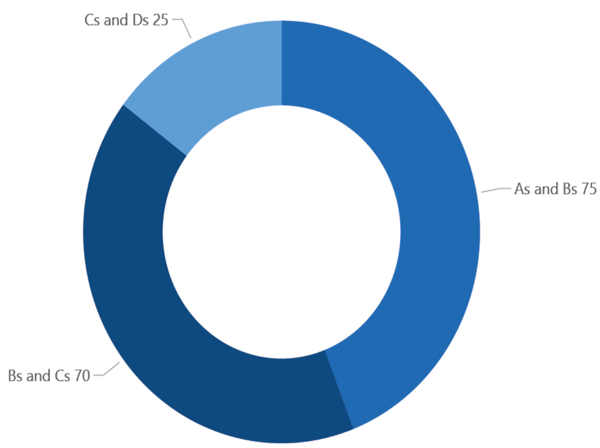


Figure 2

Participants' Self-Reported Academic Performance



Despite this, in the next several items, 35.9% of participants stated that they had a person or software write an assignment for them in university, and 54.7% reported that they had engaged in academic dishonesty in university, such as copying answers on an exam, using the phone to cheat, plagiarism, etc. Only 11.8% of participants reported being accused of academic dishonesty in university.

We were also interested to find out what students perceive are their instructors' stances toward ChatGPT use. According to the participants' responses, it appears that in most cases some or most instructors mentioned ChatGPT in their classes (Figure 4).

However, it seems instructors take a varied approach to students' ChatGPT use, as seen in Figure 5. Around a quarter of instructors forbid students to use it, while more than a third discourage its use. There are students who simply do not know where their instructors stand (14%) as well as those who state that ChatGPT use has not been discussed in class (12%).

In the next item, we inquired into whether the participants have ever used ChatGPT for a written assignment in university. In spite of the instructors' predominantly negative stance toward ChatGPT use, close to a half of the participants (44.7%) reported using ChatGPT in university. Of those who had used it, only three students shared that information with the instructor. In addition, when the participants had used ChatGPT for the assignment and had not disclosed that to the instructor, only four students reported that the instructor noticed.

Next, in line with the research questions posed, we wanted to investigate how students use ChatGPT for their written assignments. As seen in Figure 6, of the 94 participants who use ChatGPT, most (81.9%) do so to generate ideas. Among other frequent uses are for paraphrasing (46.8%), summarizing (44.6%), proofreading (31.9%), but also for writing a part of the assignment (36.1%). Seventeen students (18%) reported that they had used ChatGPT to produce the entire assignment. The participants were also able to enter their answer to this item, and one response was received for each of the following: to find out if something sounds good, to translate, to see the structure, and to write a reference list.

Considering that students have evidently discovered several good uses of the tool, it is not surprising that more than half of the participants find ChatGPT helpful or very helpful. Only

Figure 3

Participants' Familiarity with Their University's Academic Honesty Policy

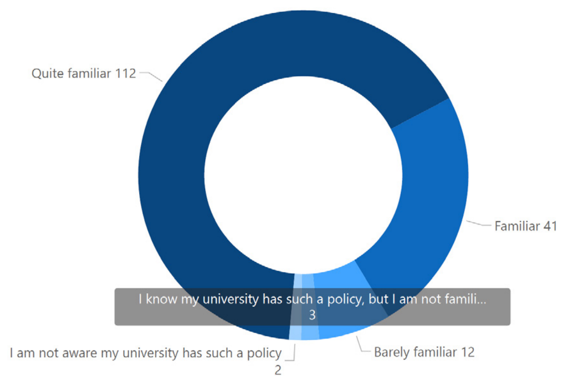


Figure 4

Instructors Mentioning ChatGPT in Class (as Perceived by the Participants)

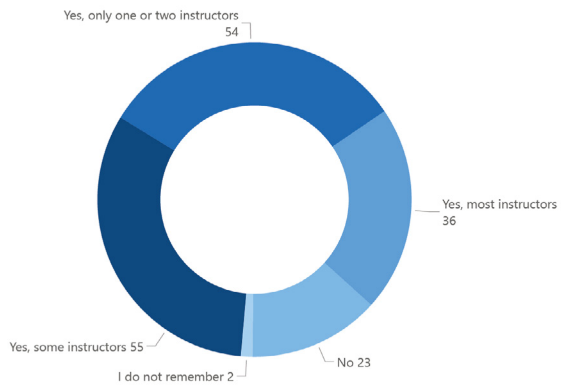


Figure 5

Instructors' Attitudes toward ChatGPT Use (as Perceived by the Participants)

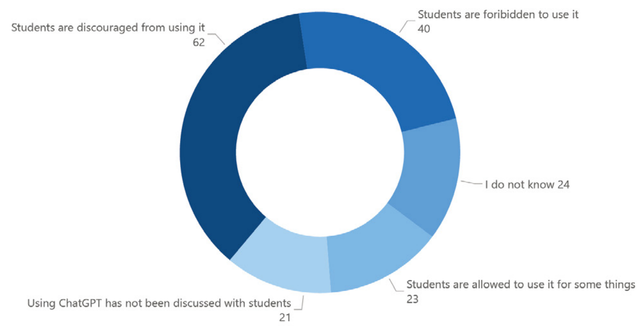


Figure 6

Participants' Use of ChatGPT

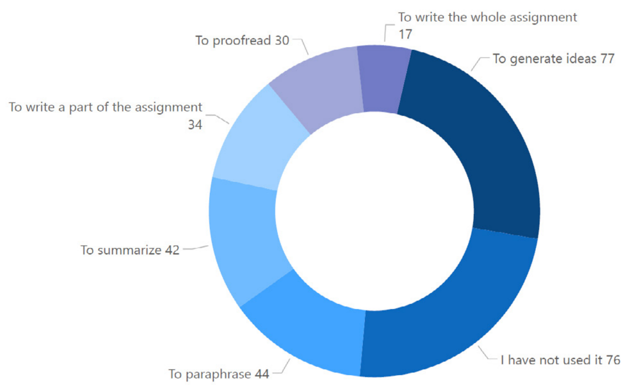


Figure 7

Participants' Opinion about the Helpfulness of ChatGPT

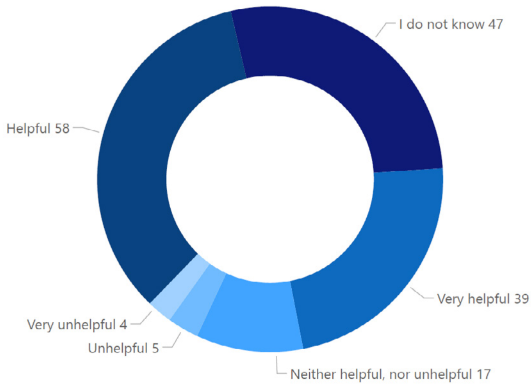
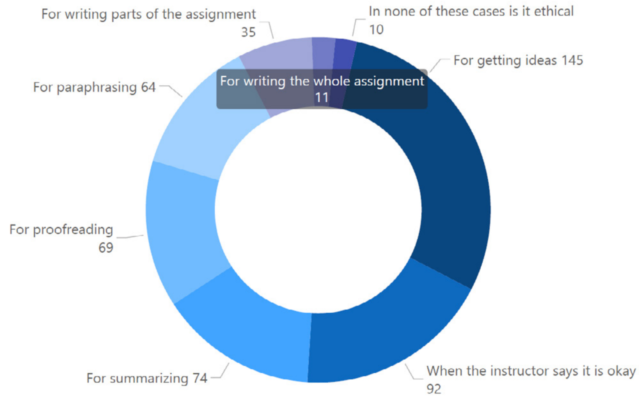


Figure 8

Participants' Views on the Ethical Aspects of ChatGPT Use



nine students have a negative stance as they find it unhelpful or very unhelpful (Figure 7).

Second to the last item in the survey targeted the participants' views on the ethical aspects of using ChatGPT. It appears that the most ethically acceptable way to use ChatGPT is for getting ideas (Figure 8). Interestingly, 54.1% of participants would delegate the decision of the ethics of using the tool to their instructors, by opting for the statement that it is ethical "when the instructor says it is okay". While 17 students reported using ChatGPT for writing the whole assignment (previous Figure 6), only 11 stated that this was ethical. A similar number of participants (34) who had used it to write parts of the assignments stated that this was ethical (35). Only 10 students found the use of ChatGPT unethical in all of the cases provided.

In the last, optional open-ended item, students were able to provide their comments on the topic. Regarding the ethical aspects, one student noted that ChatGPT "is not harming anyone or any law or dishonesty policy" and, in a similar vein, another noted that if "using it is considered dishonest, universities should regulate it". A student observed that "it's obviously non-ethical when it writes instead of you, but it has some purposes where it can be used for good and very beneficial". Accordingly, a participant praised ChatGPT, writing that "it's really good for helping to express yourself when you aren't sure how to word something". Related to its potential, a participant finds it "is a very useful tool to help students with their assignments when professors don't have time for helping them or when they didn't help them a lot, so they need additional help." Another participant wisely noted, "Utilizing it shouldn't be prohibited, but encouraged in a smart way. It is the future regardless if people don't use it while it is still in its development stage." In view of future directions, a participant stated that "students should be taught about how to use it and evolve their ideas easier, not use it to create ideas but rather to do boring work, and it's basically the future". One student, however, was cautious, stating, "Writing is both a creative and cognitive challenging process. Using ChatGPT in my opinion deprives an individual of mental engagement. Being innovative and disruptive, the true impact of such technology on human mental and cognitive agility remains to be seen in the decades (generations) to come."

DISCUSSION

With this study we aimed to find answers to the following questions:

RQ1. How prevalent is the use of ChatGPT among university students?

RQ2. How do university students use ChatGPT?

RQ3. What are the perceptions of university students regarding the ethical aspects of using ChatGPT?

Before addressing the research questions specifically, let us discuss the sample for a better interpretation of the results. We had predominantly second and first-year students from private universities, although there were some students from higher year levels as well as public universities in Croatia. Many participants reported performing well academically. Furthermore, most were familiar or quite familiar with their university's academic honesty policy. However, familiarity did not prevent them from engaging in academic dishonesty in university, as 54.7% reported doing this, 35.9% reported having a person or software write an assignment for them in university, and 11.8% reported having been accused of academic dishonesty in university. Compared to the findings from previous studies carried out in the Croatian context and summarized in literature review, the first two figures seem modest; however, this might be due to a strict implementation of the academic honesty policy at one of the institutions surveyed. As for the participants' information about their instructors, it appears that in at least half of the sample some or most instructors mentioned ChatGPT in class, and that a quarter of the instructors forbid using it while slightly more than a third discourage students from using it. It is with this information in mind that we are to interpret the data.

How Prevalent is the Use of ChatGPT Among University Students?

Regarding the first question of the prevalence of use, when asked directly whether they had used ChatGPT for their written assignments in university, 44.7% responded that they have, but when asked to select different ways that they have used it, it turns out more than half of the participants (55.2%) used it. While this inconsistency in answers is interesting, it is certainly expected and understandable considering how sensitive the topic is as it explores students' possibly unethical behaviors and thus affects their image of self. Of those who reported having used ChatGPT, only four students shared that they were caught, that is, that the instructor noticed that they had used ChatGPT for their written assignment. The result regarding the prevalence of use is in line with that of Singh et al. (2023) who found that although UK students were generally familiar with the tool, they reported not using it on a regular basis. However, these findings contradict those of Jowarder (2023) who found that most US students in his study were familiar with ChatGPT and had indeed used it in their education. This could be explained by the difference in the time when these studies were carried out. With each passing month, students, generally quick to adopt technological innovations, probably learned more about ChatGPT and experimented more, leading to an increase in the number of students across the world using the tool.

How do University Students Use ChatGPT?

Regarding the second question of how they use ChatGPT, most students who use it, do so to generate ideas (81.9%), which is followed by paraphrasing (46.8%), summarizing (44.6%), writing a part of the assignment (36.1%), and proofreading (31.9%). Seventeen participants (18%) reported using it to write the whole assignment for them, which is certainly a cause for concern. We found these categories of uses to be quite comprehensive as the participants had an option to enter their answer, and only a few participants used this opportunity; one response was recorded for the following participant-added uses: to find out if something sounds good, to translate, to see the structure, to write a reference list. Other studies have found that students use ChatGPT to clarify difficult concepts, find relevant study materials, do research for their coursework (Jowarder, 2023) and obtain information and receive feedback (Ngo, 2023). With time, we believe students will discover other ways to use ChatGPT for their written work beyond these examples. This is especially true if they receive guidance and advice from their instructors on how they can ethically use ChatGPT to help their writing process. For this to occur, of course, the instructors need to be very familiar with the possibilities of emerging technologies.

Undoubtedly, students in our research, at the time it was carried out, were using ChatGPT for their written assignments and were perhaps still in the stage of experimenting with its features. In the last, open-ended question in the survey, the students highlighted that ChatGPT is a great help when one is uncertain how to word something, but also when the instructor had not provided sufficient guidance or assistance (due to a lack of time or other reasons). Interestingly, only three students reported disclosing the information that they had used ChatGPT to their instructor. This indicates that the ethical aspects of ChatGPT use were not clear to the students at the time, which was probably exacerbated by instructors not taking a unanimous and clear stand on the matter. Nonetheless, most participants find ChatGPT to be a helpful or even very helpful tool (57%), while only nine students have a negative stance as they find it unhelpful or even very unhelpful. These results are in line with the findings of other studies, such as Ngo (2023) and Yilmaz & Karaoglan Yilmaz (2023), whose participants had a predominantly positive outlook on using ChatGPT in their education. Interestingly, 28% of participants in our study stated they did not know whether it was helpful, which might be because they had not tried it yet or they had not yet experienced its advantages – or disadvantages.

What are the Perceptions of University Students Regarding the Ethical Aspects of Using ChatGPT?

As for the third research question on the ethical aspects of ChatGPT use, whether they have used it or not, 85.2% of participants think it is ethical to use it to generate ideas. Around half of the participants, curiously enough, would rely on the instructors' say on the matter of what is or is not ethical use. This indicates that many students expect guidance from their instructors, which is not surprising. However, at the time of the study, the instructors had not yet taken a common stand, or had predominantly taken a negative stand on ChatGPT use. While the tool is still relatively new, and a hotly debated topic, instructors' opinions are key to setting the foundations for AI usage in classrooms. If there are no guidelines on what for and how to use ChatGPT, it cannot be expected of students to figure out the ethical usage and to solve the issue of academic honesty by themselves.

Indeed, other researchers on the topic (e.g., Jowarder, 2023; Ngo, 2023; Singh et al., 2023; Yilmaz & Karaoglan Yilmaz, 2023) have also highlighted the importance of providing guidelines to students.

In line with previous research referenced in literature review, being aware of what is unethical and engaging in unethical behavior are two different things. Thus, while 17 participants stated they had used ChatGPT to write an entire assignment for them, 11 found this to be ethical. In addition, there were 34 participants who reported using ChatGPT for writing parts of the assignment, and there were 35 who stated that this indeed is ethical. Jowarder (2023) also found that many students used the fact that plagiarism detection software had not been able to detect AI-generated writing and submitted written assignments generated by ChatGPT without getting caught.

The fact that there are students who understand that cheating by using ChatGPT to write an assignment is unethical, yet (would) do it nonetheless, points to an under-researched aspect, and that is the role personality traits play in using AI tools for cheating. In a study on 283 university students from Austria, Greitemeyer and Kastenmüller (2003) found that "individuals who prioritize fairness over their own interests" (Honesty-Humility) were least likely to cheat using ChatGPT, as were those with a strong work ethic (Conscientiousness) and those who "prefer to tackle challenges with their own original ideas" (Openness to Experience). On the other hand, students who are manipulative and strategic (Machiavellianism), self-focused (narcissism), or unemotional (psychopathy) were more inclined to submit AI-generated texts. Similarly, Malesky et al. (2021), who carried out a study on 361 undergraduate students from the United States on the effect of peer influence, honor codes, and personality traits on academic dishonesty, found that participants who scored high on the Openness to Experience trait were less likely to cheat. Their main finding, however, is that peer influence had a significant effect on engaging in academic dishonesty. This is in line with the results from a study on 164 university students from the United States by O'Rourke et al. (2010). The authors found that witnessing other students cheat increases cheating behavior in the observers. Hence, these findings on the influence of personality traits, honor codes, and peer influence should be considered when developing guidelines and strategies for academic integrity in the age of AI tools.

While some students certainly know the boundary, such as the participant from our study who stated that the use of ChatGPT is unethical when one asks it to write instead of oneself, as another participant observed, it is the universities that need to regulate ChatGPT if they consider it unethical. Indeed, universities and instructors must lead the change (e.g., Cotton et al. 2023; Crawford et al., 2023; Currie, 2023; Sweeney, 2023; Vaccino-Salvadore, 2023) if they want to turn chaos into growth.

Students recognize the potential of the tool and are aware of its disruptive power to education. For example, a participant explained that AI-powered tools are the future regardless of whether one uses them or not, so their use should be encouraged rather than prohibited. Another participant suggested that students should be taught how to use it for "boring work". However, it is understandable that some students are more cautious regarding AI in writing. A participant warned that ChatGPT deprives people of mental engagement as writing is not only a cognitive but a creative endeavor as well.

At this point, let us return to the sample. It should be noted that the 31 university students who did not complete the survey because they stated they had not heard about ChatGPT is still a valuable piece of information. This can be explained in two ways. It might be that the students did not feel they had the right level of anonymity to state that they had indeed heard about ChatGPT. In such circumstances, stating this might appear to the participants as their "admission of guilt", in particular because in the early months of 2023 we could observe the backlash of academia against ChatGPT, which was later substituted, or rather, supplemented, with the exploration of ways it could be used in classes. However, we are more inclined to believe that most of these participants had not in fact heard of ChatGPT at the time they were taking the survey. We believe this number would have been significantly lower just a month or two later.

Limitations

Finally, we would like to address the limitations of our study. Using a questionnaire as a data-collection instrument meant that we were relying on students self-reporting their potentially unethical behavior. Even though the questionnaire was anonymous and a number of steps were taken to ensure students feel safe to provide truthful responses, we cannot disregard the possibility that some of them were not honest when giving answers. This is related to a very human trait of trying to maintain an image of one's ideal self by providing responses one believes are more socially acceptable, even when being anonymous. In further studies, other sources of data could be used, such as instructors' input, academic dishonesty reports, or student work. In addition, our sample predominantly included students from private as opposed to public universities, and these students were at lower year levels. Further research should aim toward a more balanced sample that would be more representative of the general student population. Despite the limitations listed above, we are confident that our study provides valuable insights into the matter.

CONCLUSION

The study has provided valuable insights into the prevalence of ChatGPT use among Croatian university students and has shed light on the ethical considerations surrounding its application. It has also highlighted the dire need for guidance coming from universities and instructors. The introduction of ChatGPT in a country with a historical and cultural propensity for academic dishonesty has resulted in chaos, with both students and instructors experimenting with the AI-powered tool, testing the limits of its ethical use and application in the classroom. While this is understandable considering the novelty of the innovation, it cannot and should not be the way forward.

We firmly believe that universities and instructors must take a proactive stance, not through prohibition, but by embracing ChatGPT and other AI-powered tools while providing clear guidelines to students. With proper guidance, these tools can be utilized in ethical and creative ways, ultimately – and hopefully – leading to a reduction in academic dishonesty offenses. The responsibility lies with educational institutions to lead the way in shaping the ethical use and application of ChatGPT, fostering a culture of integrity and responsible technology use among students.

By acknowledging the potential pitfalls and challenges associated with ChatGPT, and by actively addressing them through comprehensive guidelines and ongoing support, universities can harness the power of AI to enhance education while maintaining academic integrity. This approach will pave the way for a more ethical and productive integration of AI technologies in the learning environment, benefiting both students and instructors alike.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Nikola Črček: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Resources; Writing – original draft; Writing – review & editing.

Jakob Patekar: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Visualization; Writing – original draft; Writing – review & editing.

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Predictors of Language Proficiency among Medical and Paramedical Students: Vygotskian Sociocultural Theory

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ABSTRACT

Background: There are many factors in determining language proficiency among university students. Identifying these factors can help the teaching and learning process to move forward more quickly and effectively.

Purpose: This study aimed to explore the relationship between social, cultural, and linguistic factors and the language proficiency of 221 medical and paramedical students at Shiraz University of Medical Sciences to identify if these factors contribute to language proficiency as an effective variable in students' communication, academic performance, and quality patient care.

Method: The authors administered a questionnaire on these factors' role and a proficiency test. Then, they ran Pearson's correlation coefficient and multiple regression analyses to determine the relationship and effects of such factors concerning language proficiency.

Results: The t-test revealed a statistically meaningful difference between medical and paramedical students concerning both mean scores of proficiency and cultural factors. The results indicated only social and cultural factors statistically correlated with paramedical students' proficiency. Furthermore, none of these factors built any relationship or exerted any effects on the proficiency of medical students.

Conclusion: The results implied that educational policymakers should consider the existing differences between university students of different fields since they come from different sociocultural and linguistic backgrounds that have affected the academic stance in which they are studying. Moreover, the findings necessitate encouraging the policymakers and university lecturers to enhance their sociocultural competencies to adapt and fulfill the needs of such students and highlighting the roles of the family's socioeconomic positions through some workshops since the role of the family is an important variable in determining the extent to which a learner has acquired a specific cultural competence.

KEYWORDS

cultural factors, language proficiency, linguistic factors, medical students, paramedical students, social factors

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INTRODUCTION

Proficiency in English has become a crucial skill for individuals engaged in diverse fields of study within an international context. Numerous studies have delved into the constituent constructs and determining factors of English proficiency. Oller (1983, as cited in David, 2014) emphasizes that language proficiency is not a singular ability but encompasses distinct yet interconnected constructs, constituting a general language proficiency construct. Various factors influence the level of English proficiency among learners. House (2002) notes that students' traits, lifestyles, learning contexts, and activities contribute to their proficiency. Credé and Kuncel (2008) reveal a correlation between students' study skills, habits, attitudes, motivation, and academic performance. Additionally, language proficiency intertwines with expatriate adjustment and job performance (Bhatti & Alnehabi, 2023).

In parallel, second language acquisition theories and models, evolving since the early 1970s, increasingly consider social and cultural factors. Munro[1] (1999) posits that the culture in which learning occurs, and the social interactions engaged in by the learner significantly influence what and how a person learns. Lantolf and Poehner (2014) highlight Vygotsky's sociocultural theory as a cognitive theory rooted in Marx's materialist philosophy. This theory emphasizes the emergence of consciousness and development through the dialectical interaction between the biologically endowed brain and social activities shaped by cultural institutions, artifacts, and concepts. This study aims to integrate Vygotsky's sociocultural theory, combining cognitive linguistics and sociocultural perspectives as its framework. Specifically, the study seeks to explore the relationships and effects of social, cultural, and linguistic factors on the English proficiency of medical and paramedical students at Shiraz University of Medical Sciences.

This research addresses a gap in the literature, as the relationship and effects of these factors on the English proficiency of medical and paramedical science students in an English as a Foreign Language (EFL) context like Iran has yet to receive adequate attention. Notably, in medical sciences, students' proficiency in English is crucial for their future success in professional, social, cultural, and economic realms. The study focuses on two groups, medical and paramedical students, to uncover the underlying predictors of their English language proficiency. Recognizing language proficiency as a valuable asset, the research anticipates contributing insights that will aid students in excelling in their studies, understanding complex scientific concepts, engaging in lectures, discussions, and research, participating in clinical rotations, establishing effective patient communication, preparing for licensing examinations, improving employment prospects, and fostering global collaboration in the field of medicine.

Theoretical Framework

Sociocultural Theory is derived from the earlier work of Vygotsky (1987), a Russian psychologist. According to the Sociocultural Theory, an individual's mental ability is an integral part of their social environment, and their cognitive abilities develop through social interaction, which shows the impact of social factors on mental abilities (Daniels, 2001; Vygotsky, 1987).

In this theory, the person's performance occurs in cultural settings mediated by language; knowledge construction occurs in their cultural environment (Wertsch & Hickmann, 1987). Torne (2000) also mentioned that language is socially constructed in this theory, not intrinsic. From the Sociocultural Theory perspective, language is an important tool and mediator of goals during social and cultural communication, forming the basis for knowledge construction. This theory highlights the role of meaningful interaction in language learning, especially in L2 development (Alkhudiry, 2022).

LITERATURE REVIEW

In the current era of global integration, language proficiency plays a crucial role in assisting students in adapting to life and work conditions. Literature reveals that many studies emphasize various socio-cultural and linguistic factors contributing to English language proficiency and its components. For example, Alfayez, Strand, and Carline (1990) highlighted academic, social, and cultural factors influencing the academic achievement of university students. Oh and Kit-fong Au (2005) explored the effects of socio-cultural variables on language learning, while Verhoeven and Vermeer (2006) and Lori and Al-Ansari (2001) investigated the role of motivational and sociocultural factors on language and literacy achievement. Credé and Kuncel (2008) emphasized the impact of students' study habits, skills, and attitudes on their academic achievement and proficiency, and Khalifa (2012) examined the effects of age factors on learning English.

Learning a language goes beyond mastering grammar and lexicon; it involves cognitive and social skills. This study aims to explore how sociocultural factors, along with linguistic aspects, influence language learning. In Iran, where this study is conducted, several studies have focused on sociocultural factors in language learning. For instance, Razmjoo and Movahed (2009) emphasized the place of sociocultural factors in language learning, Gholami (2012) pinpointed the effects of social facets, Sadeghi (2013) highlighted the contribution of learning strategies and starting age of learning the language, and Amirabadi and Razmjoo (2017) worked on the role of social, cultural, and linguistic determinants of EFL learners' language proficiency.

However, none of the aforementioned studies presented a comprehensive model of these relationships, and they were not conducted in an EFL context of medical and paramedical sciences. The literature is scarce concerning the perception of medical and paramedical students towards factors contributing to English language proficiency and communication skills. English is evolving as an international communication and educational language in medicine. Language proficiency and communication skills are crucial for effective doctor-patient communication to provide quality care (Bennett & Lyons, 2011).

[1] Munro, J. (1999). Social-cultural influences on learning. *Culture and Learning*. https://students.education.unimelb.edu.au/selage/pub/readings/psyexlearn/PELculturaleffects.pdf

Poonam et al. (2023) systematically reviewed the relationship between culture and English language learning, drawing on relevant theories and frameworks such as language acquisition, sociocultural theories, and intercultural communication. They found that culture is a determining factor in English language learning. In another study, Razmjoo and Movahed (2009) investigated the relationship between Iranian MA students' language proficiency at Shiraz University in 2008 and social and cultural factors. The results showed no significant difference between males' and females' language proficiency; however, the student's language proficiency significantly differed considering age, major, and social classes. Additionally, the mother's literacy and use of films/CDs, two cultural factors, considerably predicted the students' language proficiency.

However, studies are coming up with the effects of social or socioeconomic predictors of language proficiency, including the qualitative study by Amir Abadi and Razmjoo (2022), who addressed the most influential factors in the development of language proficiency using SEM procedures. The study was analyzed adopting the grounded theory, which showed the role of social, cultural, and linguistic factors, with social aspects surpassing the others. Another study by House (2002) asserts that socioeconomic status influences language learning; he has concluded that students from above-average or average-income families learn language more effectively. Another piece of research was performed by Amirabadi and Razmjoo (2017), who investigated the relationship between EFL learners' language proficiency and the social, cultural, and linguistic factors. A researcher-made questionnaire and a proficiency test were used to identify these factors. Structural Equation Modeling and factor analysis significantly associated social factors and language proficiency. However, cultural factors and English proficiency showed the weakest relationship. Finally, quantitative and path analysis showed the degree of relationship between each factor and language proficiency.

Besides cultural and social determinants of language proficiency, some studies were devoted to probing into the academic abilities, linguistic factors, and the learners' attitudes toward language learning. The studies done by Alfayez, Strand, and Carline (1990) and Credé and Kuncel (2008) presented academic ability and English language proficiency as the most important predictors of performance in medical schools. Another study by Bagheri and Andi (2015) found a slight positive correlation between medical students' attitudes toward English language learning and proficiency. In contrast, male and female students did not significantly differ in their attitudes toward English language proficiency and learning.

As the literature unveils, considering the impacts of cultural, social, and linguistic predictors of language proficiency, the research in the medical and paramedical EFL contexts is scant, and more studies must be conducted. Moreover, to the researcher's knowledge, no model has been developed on the relationship between the abovementioned factors and English language proficiency for medical and paramedical students. This finding, in turn, signifies the pursuit of such research in light of a sociolinguistic framework to better fulfill the learners' learning objectives in these fields.

The present study investigated differences between medical and paramedical students regarding language proficiencies and social, cultural, and linguistic factors. The second and third objectives were to see whether social, cultural, and linguistic factors are related and affect the medical and paramedical students' language proficiency.

Accordingly, the following questions were raised under the five aforementioned general categories of the objectives:

Q1: Are there any significant differences between medical and paramedical majors regarding their proficiencies?
Q2: Are there any significant differences between medical and paramedical majors regarding social, cultural, and linguistic factors?
Q3: Is there any significant relationship between social, cultural, and linguistic factors and the language proficiency of both medical and paramedical students in the total sample?
Q4: Is there any significant relationship between social, cultural, and linguistic factors and the language proficiency of medical students?
Q5: Do social, cultural, and linguistic factors affect the language proficiency of medical students?
Q6: Is there any significant relationship between social, cultural, and linguistic factors and the language proficiency of paramedical students?
Q7: Do social, cultural, and linguistic factors affect the language proficiency of paramedical students?

METHOD

Design

This study has a quantitative survey design in which the data were collected through questionnaires and were analyzed through descriptive and inferential statistics.

Participants

The participants of this study were medical and paramedical students at Shiraz University of Medical Sciences, Shiraz, Iran. They were male and female students (Table 1) aged 18 to 22. 101 male and 119 female participants comprised 45.9 and 54.1 percent of the sample, respectively. Only one questionnaire was missing regarding gender.

The participants were selected based on criterion sampling. These students had either passed the pre-university course as a prerequisite and criterion to the General English 1 course or scored above fifty percent in the national university entrance exam. This criterion was set by the faculty members of the English department at Shiraz University of Medical Sciences to put the students with almost the same level of proficiency in the same classes. At the time of the study, the participants were studying General English 1 and had to take part in two subsequent exams, namely, one midterm and one final exam. The following table (Table 2) demonstrates the features of the participants.

Instruments

The authors administered a questionnaire developed by Amirabadi and Razmjoo (2017). Before administering the questionnaire, they confirmed the reliability and validity of this 5-Likert scale questionnaire. To examine the construct validity of the questionnaire, the authors ran a Confirmatory Factor Analysis, which showed that all the goodness of fit indices are within the acceptable range. That is, $\chi 2/df = 1.71$ was less than 3, GFI= 0.96 and NFI= 0.95, CFI= 0.98, and AGFI= 0.94 were all above .90, and RMSEA= 0.04 was less than .08. Moreover, to examine the reliability of the questionnaire, Cronbach's alpha was employed. The reliability coefficient was .714 for this scale, which shows that the scale enjoys acceptable reliability. Table 3 shows the results.

The questionnaire utilized in this study comprises the following sections:

a. Demographic data
b. Social factors (items 1-28)
c. Cultural factors (items 29-38)
d. Linguistic factors (items 39-50)

The following tables depict demographic data.

Table 3 displays the number of years the participants have studied English. The results showed that most participants had more than seven years of experience. Although this variable had not been included in the questionnaire as an independent variable, it is effective, potentially altering proficiency as a dependent variable. The ANOVA test calculates its effect in the following table (Table 5).

Table 4 shows p-value= 0.00< 0.05, demonstrating that the number of years one has studied English has an influential role in determining the students' English proficiency, i.e., more years of studying English develop the student's proficiency in medical and para-medical fields.

Table 5 indicates the participants' parents' literacy. As can be grossly seen, most of the participants' parents are literate (96.3%). This finding shows that most of the participants come from educated families. There are, of course, five missing pieces of the required data reported on literacy.

Table 6 is indicative of the participants' mother tongue. As can be seen, most of the students have Persian (89.6%) as their first language.

A proficiency test was another instrument used in this study. The proficiency test includes 70 vocabulary and reading comprehension questions. The coordinator (an associate professor) and two other colleagues (one associate professor and one professor) commented on the quality and difficulty level of the items to ensure their content validity. The exam was not discipline-specific as a determining factor.

Table 1

Frequency and Percentage of Males and Females in the Total Sample

	Frequency	Valid Percent
Male	101	45.9
Female	119	54.1
Total	220	100.0
Missing	1	
Total	**221**	

Table 2

Participants' Features

Major	Frequency	Percent	Age	Gender
Medical students of medicine, Dentistry & Pharmacy	126	57.0	18-22	Both females and males
Paramedical students of nursing, Radiology, physiotherapy, Rehabilitation & occupational therapy	95	43.0	18-22	Both females and males
Total	**221**	**100.0**	**---**	**---**

Table 3

The Number of Years the Participants Have Studied English

	Frequency	Valid Percent
5 years	37	16.8
6 years	12	5.5
7 years	40	18.2
Over 7 years	131	59.5
Total	220	100.0
Missing	1	
Total	221	

Table 4

Years One Has Studied English

	Mean	Std. Deviation	
5 years	43.78	12.658	
6 years	46.83	12.059	
7 years	50.40	9.001	.000
Over 7years	51.98	8.620	
Total	**50.05**	**10.070**	

Table 5

Participants' Parents' Literacy

		Frequency	Valid Percent
Valid	Literate	208	96.3
	Illiterate	8	3.7
	Total	216	100.0
Missing		5	
Total		**221**	

Table 6

Participants' Mother Tongue

	Frequency	Percent
Persian	198	89.6
Turkish	6	2.7
Kurdish	2	.9
Other	15	6.8
Total	**221**	**100.0**

Data Collection and Analysis

The authors administered the proficiency test and the questionnaire among the intended students. Before administration, they provided the necessary instruction to ensure the cooperation of all the students. To ensure ethical issues in this research, participants were informed on the content and goal of the study. As safeguarding participants' privacy and securing their data is paramount, the researchers mentioned the privacy measures taken. Moreover, participants' anonymity or confidentiality was promised and observed in the study. Informed consent was obtained before administering the questionnaires. Regarding data analysis, the data were descriptively analyzed to determine the proficiency mean scores and social, cultural, and linguistic factors for medical and paramedical students. The t-test was run to indicate whether there was any statistically significant difference between medical and paramedical students concerning their proficiency scores and the social, cultural, and linguistic factors. Then, Pearson's Product Moment Correlation was run to determine the relationship between socio-cultural and linguistic factors and language proficiency of master and non-master students in medical sciences. Finally, multiple regression was run to determine whether social, cultural, and linguistic factors influence medical and paramedical students' language proficiency.

RESULTS AND DISCUSSIONS

The present study investigated the difference between medical and paramedical students regarding their language proficiencies. Another objective of the study was to determine if these majors were statistically different concerning social, cultural, and linguistic factors individually in each field and the total sample. This study also probes into how each predictor of language proficiency affected the students' language proficiency in each field. Accordingly, the research questions were answered in this section to see how far the study's objectives were met.

Medical and Paramedical Students in Terms of Language Proficiencies

In line with the first research question (Are there any significant differences between medical and paramedical majors regarding their proficiencies?), Table 7 illustrates the T-test results indicating the difference between the medical and paramedical students' proficiency grades.

As the P-value equals 0.00 and less than 0.05, there is a significant difference between the mean score of medical and paramedical students' English proficiency. Figures in Table 8 display that the mean score in the medical fields is more than that of paramedical ones. This finding demonstrates that medical students outperformed paramedical students, which can be justified by the solid language background predominantly observed among master holders. This justification has been evidenced by Sadeghi Moshtaghi Kashanian, Maleki, and Haghdoost (2013). Razmjoo and Movahed (2009) also approved the relationship between the field of study and English proficiency. Moreover, Alfayez, Strand, and Carline (1990) and Credé and Kuncel (2008) identified prior academic ability and English language proficiency as the most important predictor of performance for medical students.

Table 8 indicates the mean scores for the social, cultural, and linguistic factors as 102.04, 36.98, and 37.97, from the highest to the lowest, respectively. The mean of the social factors is significantly higher than the cultural and linguistic ones for both fields of study. This finding aligns with the study by Amir Abadi and Razmjoo (2022), showing the significant role of social factors in the development of language proficiency. Moreover, figure 1 shows the mean scores of these three factors for medical and paramedical fields of study. The sociocultural factors results indicate the importance of social classes and educational and cultural backgrounds among students whose English proficiencies are lower than their medical counterparts (table 8).

Medical and Paramedical Students Regarding Predictors of Language Proficiency

Table 9 summarizes the findings to answer the second research question and see whether there are differences between the medical and paramedical students regarding the three factors. Again, the t-test unveils a statistically significant difference between medical and paramedical students concerning cultural factors;

Table 7

T-test (Proficiency Scores Between Medical and Non-medical)

	major	N	Mean	Std. Deviation	
Proficiency score	**Medical**	126	53.90	7.572	0.00ˡ*
	Nonmedical	92	44.71	10.621	

Table 8

Mean of Social, Cultural, and Linguistic Factors

Factors	Mean	Std. Deviation
Social factors	102.04	9.994
Cultural factors	36.98	5.238
Linguistic factors	37.97	3.426

Figure 1

The mean of these Three Factors

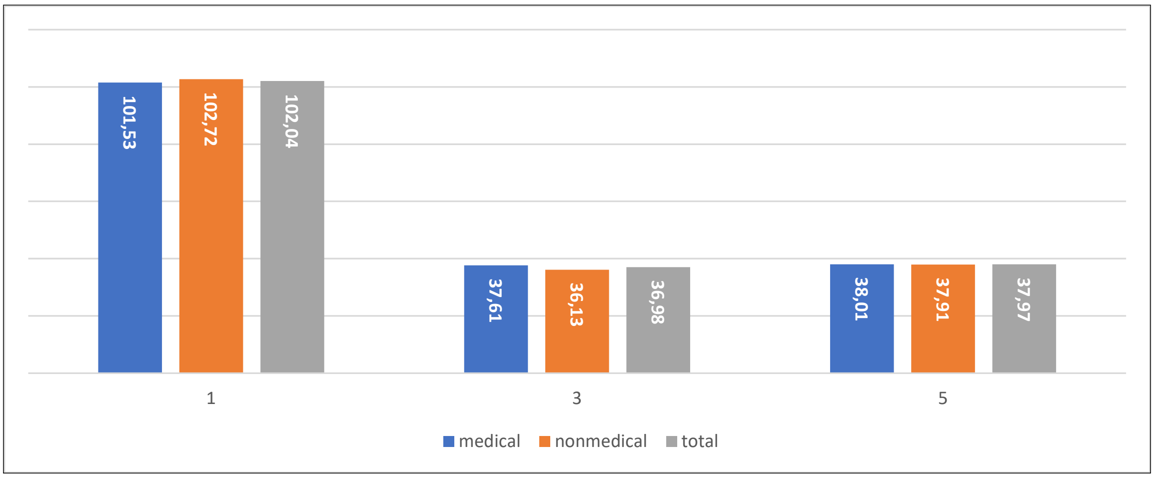


Table 9

T-test (Social, Cultural, and Linguistic Factors Between Medical and Non-medical)

	major	N	Mean	Std. Deviation	
Social factor	medical	116	101.53	8.567	0.423
	nonmedical	87	102.72	11.647	
Cultural factor	medical	119	37.61	5.740	0.045*
	nonmedical	89	36.13	4.370	
Linguistic factor	medical	119	38.01	2.898	0.843
	nonmedical	86	37.91	4.063	

Table 10

Pearson Correlation Between the 3 Factors and Proficiency Score in the Total Sample

Factors	Pearson Correlation	
Social factor	.101	.153
Cultural factor	.137	.050*
Linguistics factor	.015	.829

The Link between Social, Cultural, and Linguistic Factors and the Language Proficiency

To answer the third research question," Is there any significant relationship between social, cultural, and linguistic factors and the language proficiency of medical and paramedical students?" Table 10 indicates that the only statistically meaningful and positive relationship is between the cultural factors and the proficiency scores (0.137). Therefore, it is concluded that as cultural factors play a role, the students' proficiency scores are escalated accordingly (Figure 2). This finding is in accordance with the studies run by Poonam et al. (2023), Amirabadi and Razmjoo (2017), and Razmjoo and Movahed (2009), in which cultural factors are significant predictors of language proficiency.

The authors calculated the regression coefficients to see whether the three mentioned factors affect the medical and paramedical students' language proficiency (Table 11).

The model concerns the following postulations:

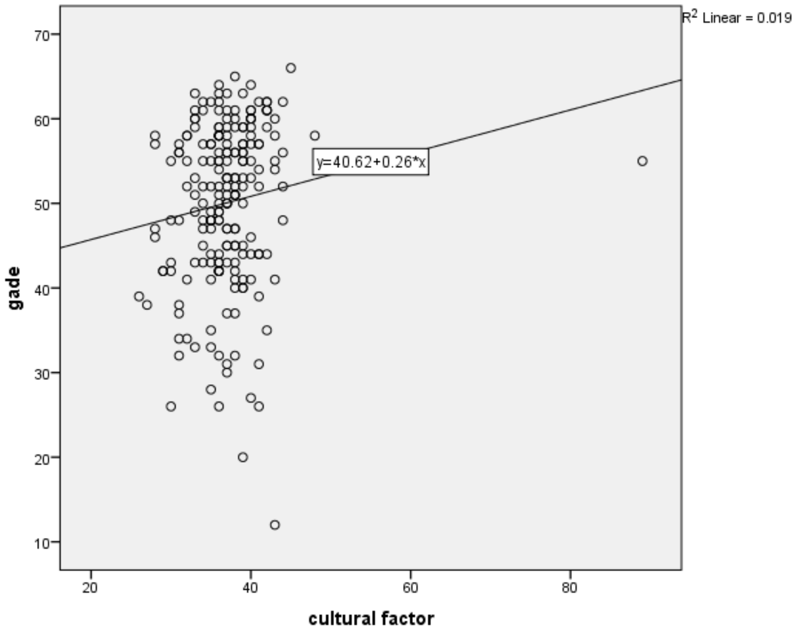
X_1=social factors, X_2=cultural factors, X_3=linguistics factor

follows here:

$$Y=33.779 +.118\,X_1 +.160\,X_2 -.048\,X_3 \quad (1)$$

Figure 2

the Relationship Between Cultural Factors and Proficiency



Influential Predictors of the Medical and Paramedical Students' Proficiency

Comparing the effect size of social, cultural, and linguistic factors in this regression model shows that the cultural factor with a coefficient of 0.160, the social factor with a coefficient of 0.118, and finally, the linguistic factors with a negative coefficient of 0.048 were the most to the least influential predictors of the medical and paramedical students' proficiency scores, respectively. Furthermore, it should be noted that the only constant coefficient of 33.779 with the p-value=.001<0.05 is statistically meaningful.

The link between the Predictors and Medical Students' Proficiency

Table 12 summarizes the results to investigate the relationship between the social, cultural, and linguistic factors and medical students' proficiency, which addresses research question 5. The results exhibit the social, linguistic, and cultural factors with a correlation coefficient of +0.027, -0.024, and -0.021, respectively, indicating positive and negative relationships with the proficiency scores in the medical group. However, none of these factors have maintained a statistically significant relationship with the proficiency scores in this group. This finding can indicate that other factors, mainly internal predictors such as intrinsic motivation, have affected the participants' proficiency as an internal drive. It aligns with what Lori and Al-Ansari (2001) have stated. They believed that motivation is one of the most significant but complicated variables in explaining individuals' differences in language learning. Dörnyei (2001) also stated that much research showed motivation as a significant determinant in L2 acquisition. Credé and Kuncel (2008) also discovered that study skills, habits, attitudes, and motivation for studying positively correlate with students' academic performance, although their study did not investigate medical fields.

The authors ran multiple regression analyses to see whether the three factors bear any effects and can be the predictors of language proficiency of the medical group posed in the sixth research question. The estimated regression model for the medical fields is as follows:

$$Y=55.312 +.036\, X_1 -.051\, X_2 -.089\, X_3 \quad (2)$$

In this regression model (table 13), however, linguistic factors such as the role of mother tongue, grammar, the field of study, and academic abilities have shown a negative effect (-0.089) in terms of the effect size; they highly influenced the proficiency test scores in this group. This finding is more or less in accordance with the results found by Alfayez, Strand, and Carline (1990) and Credé and Kuncel (2008). They state that prior academic ability and English language proficiency are the most important predictors of performance in medical school. The cultural and social factors with coefficients of -0.051 and 0.036 are other influential factors.

The Link between the Predictors and Paramedical Students' Proficiency

Table 14 shows the findings related to the sixth research question concerning the relationship between the three

Table 11

A Regression Model for the Three Factors and Proficiency Scores in the Total Sample

Model *B*	Unstandardized Coefficients		Standardized Coefficients	
	Std. Error	Beta		
(Constant)	33.779	10.060		.001*
Social factor	.118	.083	.116	.157
Cultural factor	.160	.142	.087	.259
Linguistic factor	-.048	.231	-.016	.836

Table 12

Correlation Between the Three Factors and Proficiency Scores in the MEDICAL Group

Factors	Pearson Correlation	
Social factors	.027	.770
Cultural factors	-.021	.819
Linguistics factors	-.024	.794

Table 13

A Regression Model for the Three Factors and Proficiency Scores in the MEDICAL Group

Model *B*	Unstandardized Coefficients		Standardized Coefficients	
	Std. Error	Beta		
(Constant)	55.312	12.328		.000*
Social factor	.036	.091	.041	.694
Cultural factor	-.051	.128	-.040	.692
Linguistic factor	-.089	.270	-.034	.742

factors and paramedical students' proficiency. Pearson's correlation indicates linguistic factors capture the smallest correlation coefficient of 0.055, which is not statistically significant for the paramedical group. However, cultural and social factors display correlation coefficients of 0.244 and 0.222, with the proficiency scores statistically significant for the paramedical fields. The role of social and cultural factors have been repeatedly emphasized in the literature, such as Lantolf and Poehner (2014), Alfayez, Strand, and Carline (1990), Snow (1993), Roebuck (2001), Lori and Al-Ansari (2001), House (2002), Sysoyev and Donelson (2002), Oh and Kit-fong Au (2005), Haworth et al. (2006), Verhoeven and Vermeer (2006), Hew Tano (2007), Credé and Kuncel (2008), and Khalifa (2012) and the studies carried out in Iran as an EFL context such as those of Tabasi (2000), Rezaeian (2001), Salamian (2002), Fijani (2005), Hassani (2005), Mohammadi (2007), Razmjoo and Movahed (2009), Gholami (2012), Sadeghi (2013), Bagheri and Andi (2015), and Amirabadi and Razmjoo (2017). A critical review of Vygotsky's Socio-Cultural Theory suggests that concepts, social objects, and activities fundamentally regulate mental performance. This issue indicates the impact of sociocultural perspectives on L2 learning (Lantolf et al., 2015; Lantolf et al., 2020).

Table 15 illustrates the findings of the last research question regarding the effects of social, cultural, and linguistic factors on the proficiency of paramedical students. The estimated regression model for the para-medical fields is as follows:

$$Y=15.952 +.282\, X_1 +.155\, X_2 - .154\, X_3 \qquad (3)$$

According to Table 15, linguistic factors showed a negative and insignificant coefficient. However, the social and cultural factors have established positive coefficients; 0.288 and 0.155, respectively. Only social factors are meaningfully present in this regression model for the para-medical fields. This finding aligns with House's (2002) assertion that socioeconomic status is one of the determinants of learning; he has concluded that students' learning improves if they are from an above-average or average-income family. Also, according to Amirabadi and Razmjoo (2017), social factors have established a significant relationship with language proficiency. However, in this study, the results are obtained for the paramedical fields, which can signify the importance of such socioeconomic predictors as social class, economic position, learning age, the role of technology, and parents' literacy for those students with weaker language backgrounds in paramedical fields.

Table 14

Correlation Between the Three Factors and Proficiency Score in the PARA-MEDICAL Group

Factors	Pearson Correlation	
Social factors	.222	.040*
Cultural factors	.244	.024*
Linguistics factors	.055	.617

Table 15

A Regression Model for the Three Factors and Proficiency Scores in the PARA-MEDICAL Group

Model *B*	Unstandardized Coefficients		Standardized Coefficients	
	Std. Error	Beta		
(Constant)	15.952	13.304		.234
Social factor	.282	.134	.303	.039*
Cultural factor	.155	.327	.066	.636
Linguistic factor	-.154	.319	-.057	.631

CONCLUSION

This investigation delved into the intricate interplay of social, cultural, and linguistic factors impacting the English proficiency of 221 medical and paramedical students at Shiraz University of Medical Sciences, guided by Vygotskian sociocultural theory. The central aim was to discern the extent of convergence or divergence regarding the determinants of English proficiency within these major academic fields.

The study revealed substantial disparities in English proficiency between medical and paramedical students, with the former displaying superior language skills. This outcome is in tandem with their robust language backgrounds, particularly notable in medicine, dentistry, and pharmacy. Notably, a statistically significant difference emerged in cultural factors, accentuating the pivotal role of culture and social activity in language learning, aligning with Vygotsky's sociocultural theory.

While the study identified a significant relationship between cultural factors and proficiency scores, the anticipated influence of cultural variables on university students' proficiency and academic success in learning English was less pronounced. Intriguingly, no statistically significant relationship surfaced between these factors and proficiency scores in the medical group, prompting contemplation of internal and personal determinants such as motivation and learning strategies. On the other hand, cultural and social factors established a statistically meaningful relationship with the proficiency scores in the para-medical group. The ideas of social class, socioeconomic status, the role of social media, and parents' education as external factors rather than internal variables remained significant in the paramedical group compared to their medical counterparts. Also, according to the multiple regression analyses, linguistic factors did not predict language proficiency in either group. Despite valuable insights, the study faced limitations in generalizability and access to live proficiency tests. Future research should replicate the study in diverse contexts, explore more representative samples, and incorporate qualitative perspectives. Additionally, examining the internal and psychological factors affecting proficiency and restructuring the educational system to enhance students' drives is recommended.

In conclusion, this exploration underscores the multifaceted nature of language proficiency determinants. The robust findings contribute to our understanding of the nuanced factors shaping language proficiency and prompt reflection on the dynamic interplay of internal and external influences. As we navigate the implications of Vygotsky's sociocultural theory, a call arises for a holistic approach in educational systems, acknowledging both the theoretical underpinnings and practical insights offered by this study. This cohesive narrative, echoing the themes introduced in the introduction, highlights the enduring relevance of sociocultural factors in shaping language proficiency across diverse academic fields.

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DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTIONS

Shadab Moslehi: conceptualisation, investigation, writing (original draft), data curation, formal analysis.

Reza Kafipour: conceptualisation, methodology, writing (review and editing), formal analysis.

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Exploring Academic Culture: Unpacking its Definition and Structure (A Systematic Scoping Review)

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ABSTRACT

Background: The concept of academic culture lacks a standardised definition, and its structural components have not been clearly outlined or universally agreed upon.

Purpose: This systematic scoping review aims to synthesise literature on academic culture, delineate its demographic characteristics, and extract definitions of academic culture and the components of its structure.

Method: A search was conducted in the bibliographic database Scopus on August 2nd, 2023. Additionally, a search for related grey literature was carried out on August 3rd, 2023. We included studies published in English post-2018 that discuss academic culture. Titles and abstracts from the retrieved records were screened for relevance. Demographic characteristics related to academic culture were extracted from all search records. We then extracted statements from research articles, book chapters, editorials and reviews defining academic culture and describing components of its structure. These identified structural components were categorised and thematically grouped, and then distributed according to the obtained components of academic culture. This review followed the guidelines of PRISMA-ScR to perform the study search and selection.

Results: The search yielded 961 records, of which 94 met our inclusion criteria. Predominantly consisting of journal articles, book chapters, or reviews (78.44%), only 23 of these records provided definitions of academic culture and its structure. Notably, different definitions frequently conflated academic and organisational culture. The structure of academic culture was delineated into three primary components and their subcomponents. This review also analysed the main focuses of academic culture during the specified period highlighting the importance of sustainable development across the three primary components of academic culture and shedding light on the diversity of academic culture models.

Conclusion: This study successfully identified the key structural components and summarised the existing definitions of academic culture. It also highlighted principal research directions for studying academic culture. A significant aspect of this review is the investigation of various levels of academic culture, emphasising a meta-level of academic culture as a global, conventionally-determined dimension. This meta-level serves as a universal hallmark for the development of both national and local academic cultures.

KEYWORDS

academic culture, research academic culture, organisational culture, academic culture architecture

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INTRODUCTION

Since the beginning of studies in higher education, the cultural elements of universities have consistently attracted attention. Early research by scholars delved into the ideologies prevalent among students, academics, and higher education institutions at large (Becker, 1963; Reisman & Jenscks, 1962). Being the starting point for identifying academic culture as a separate category, these studies gave impetus to understanding the special architecture of academic culture and its system-forming characteristics. More recently, the concept of a specific culture behind higher education has been critically examined, particularly its supposed neutrality. Neutrality has become a political choice supporting the state of affairs that exists at a particular time neglecting its own codes and values thus preventing readers from comprehending the ideology-driven function of education involving the generation of specific types of knowledge, authority, societal beliefs, ways of acting, and accounts of the world (Filippakou, 2023). This examination has brought to light the existing tensions within the established university culture, notably those between academics and students, as identified by Pedraja-Rejas (2022). Present-day standards and more culturally diverse students demand student-centred, active-learning approaches more suited to their specific needs (Stensaker, 2018). This line of thought has evolved to understand the university system as being deeply embedded in a culture while also serving as a manifestation of that specific culture (Savarese et al., 2013, Bopape, 2022).

Apparently, today universities possess a cultural or symbolic dimension which is not incidental to nor separate from the structural elements of their organisation but separable only conceptually. The immanence of an organisation culture today no longer needs justification and has received widespread coverage in the works of researchers globally (Lacatus, 2013; Coman & Bonclu, 2016; Akyol et al., 2020; Rosanti & Udin, 2022). Following Harman (1989), who substantiated the understanding of different levels of culture perception within a university as an academic organisation, its structure and hierarchy are also indisputable (Mzangwa, 2019; Akyol et al., 2020). Moreover, it becomes clear that at different levels of structure, distinctive forms of culture are created and sustained. In universities three levels of structure that give rise to different cultural forms are those pertaining to administrative frameworks, students and members of the academic staff (Kareem et al., 2022; Rosanti & Udin, 2022).

The cultural dimensions of higher education institutions are analysed through at least four distinct approaches: (1) the culture of higher education systems, (2) the culture of professions and disciplines, (3) the culture of universities, and (4) skills of the actors in the scientific research and educational process.

The culture of higher education systems examines the significant changes in the concept of higher education over recent decades. This includes moving away from traditional views of these institutions as entities primarily responsible for professional training (Petersen & Bartel, 2020). Universities are defined by social commitment that play a vital role in the development and improvement of the society, contributing to the welfare of citizens (Ramos-Monge, 2017). These studies highlight the influence of emerging knowledge societies, increased student enrollment, and shifts in funding sources, leading to a redefinition of higher education institutions' objectives and a new ethos (Musselin, 2012). Some researchers even argue that the neoliberalization of higher education systems has led universities to deviate from their cultural missions, transforming them into entities predominantly guided by financial imperatives. Moreover, this erosion between education and profit forces students to take on excessive student loan debts and face decreased preparedness and increased basic needs insecurity (Nazmi et al., 2019; Schraedley et al., 2021).

The second perspective on the culture of higher education explores the realm of professions and disciplines. Studies in this area have highlighted how shifts in the political economy of higher education systems are reshaping the identities of graduate students. Attributes like flexibility, teamwork, critical and analytical thinking, communication skills, creativity and problem-solving skills have gained prominence (Poláková et al., 2023). In this context, the evolving culture of the academic profession, despite its traditional roots, is a key area of focus (Barnes, 2021). In terms of disciplinary culture, some research points to significant differences in the self-perceptions of academics based on their knowledge domains (Kaweesi, 2018), while other studies explore how recent trends, especially the increasing emphasis on interdisciplinarity and practical knowledge, are altering the objectives of scientific disciplines, even more, multidisciplinarity and interdisciplinarity have also become important for research policy (Mazzocchi, 2019; Daniel et al., 2022).

The third strand of research in the culture of higher education examines the predominant ideologies within various higher education institutions. This approach looks at the institution as a whole, scrutinising its self-concept and the resulting impact on students, academics, and administrators. Historically, the important functions of university include inheriting culture, practising culture and innovating culture. Key areas of interest include the mission and objectives of universities, their historical paths, and their responses to changes in the political economy and governance of the national system including pursuing of science, advocating of academia and raising of spirit. This line of study also considers how global pressures, such as the competition to conform to the research university model, the drive to be an attractive destination for students and academics, and internal demands for professional administrative structures in university management, are internally transforming the culture of different institutions (Shen & Tian, 2012).

The fourth research direction shapes the perception of the potential of a specific culture through the prism of the competencies of its carriers (Tusyanah, 2023). Even the highest examples of a particular culture can falter due to the current carrier's inability to interpret its axioms, follow them, and develop them (Zhao et al., 2022). And, although culture shapes its career, a reciprocal influence also determines the possibilities for cultural development, especially when it comes to the culture of a specific organisation.

At the same time, the aforementioned studies do not provide a clear understanding regarding the equivalence of the terms 'organisational culture' and 'academic culture' in relation to the university. A significant portion of researchers confuses the concepts of organisational culture and academic culture. There is a lack of a shared understanding of the term 'academic culture' among researchers, leading to difficulties in constructing its hierarchical architecture. This, in turn, results in contradictory interpretations of the structural components of academic culture. The absence of a clear understanding of the boundaries and architecture of each of these types of culture creates challenges in developing effective strategies for the development of the research and educational spheres of the modern university.

The current review is centred on one of the three aspects within the third dimension of academic culture. Within the triad of students, academics, and administrators, the authors are primarily focused on the academic culture of researchers.This facet of academic culture is pivotal in moulding the environment of an educational institution, impacting not just the effectiveness of a university's research outcomes but also its overall educational achievements. The purpose of this systematic scoping review is to examine pertinent scholarly sources that scrutinise the academic culture of researchers, with the goal of refining its definition and elucidating its structure. The society of knowledge necessitates the construction of the educational process as a research-oriented endeavour aimed at knowledge acquisition, which requires a profound understanding of academic culture values from all participants in the educational process. The current level of development of a researchers' academic culture, in which both academics and students play pivotal roles in this education concept, is significantly influenced by the academic culture. This culture is intended to define and shape the organisational culture of higher education institutions. Given the challenge of comprehensively covering both the academic culture of students and that of researcher-academics in a single review, this analysis will primarily focus on academics. The guiding research question for interpreting the results of this review is the relationship between the concepts of a university's organisational culture and its academic culture.

METHOD

Transparency Statement

Before commencing this study, we formulated a protocol. We affirm that this manuscript is a truthful, precise, and clear representation of the study; it reports all essential aspects of the research and adheres strictly to the original plan without any deviations. This section briefly restates our study methods, largely drawn directly from the original protocol. The PRISMA statement was utilised as a guideline for reporting this systematic scoping review.

Search Strategy

The search strategy was developed and refined through iterative consultations of all the members of the review team. The strategy was peer-reviewed by a qualified information specialist using the PRESS Checklist before execution. We searched the Scopus database. The searches were conducted on August 2, 2023. We employed various free-text phrases related to academic culture (e.g., 'university academic culture', 'academic research culture','research culture', 'adequate research culture', 'healthy research culture', 'academic literacy', 'academic work', 'academic integrity', 'academic culture structure', 'research culture structure') tailoring vocabulary and syntax for the Scopus database. Results were limited to publications from 2018 onwards. While the concept of academic culture has been extensively analysed by scholars over many years, our focus was on sources that have been recently published.

Relevant conference abstracts and Google Scholar were also searched for grey literature. For Google Scholar, an advanced search was conducted on August 3, 2023, using keywords:'academic culture', 'research culture', 'academic research culture', limited to publications from 2018 onwards.

Study Population and Eligibility Criteria

The study population consisted of articles, reviews, book chapters and editorials, characterising, or describing academic culture (Table 1). We included all study designs from any discipline found in our search, reported in English. This encompassed research articles, as well as editorials, book chapters and reviews for our demographic extraction. For the extraction of academic culture structural components, our sample was limited to studies providing empirically derived components of academic culture.

Screening and Data Extraction

Development of Data Extraction Forms

Data extraction form was meticulously developed and tested before the commencement of data extraction (Table 2).

Initial Screening Process

The first step involved screening titles and abstracts against our predefined inclusion criteria. This preliminary assessment helped us determine the relevance of the sources for full-text verification.

Full-Text Article Verification

After the initial screening, full-text sources were further assessed to ensure they met the inclusion criteria. Key information extracted from each study included:

Table 1

Eligibility Criteria

Criterion	Inclusion	Exclusion	Justification
Population	All the studies characterising or describing academic culture from Arts and Humanities and Social Sciences	All the studies outside the defined field	Focus on academic culture and research including all the actors of educational process
Concept	Studies (including journal articles, editorials, book chapters and reviews) which discuss implicitly and explicitly the concept of academic culture and its architecture	Studies which do not relate the concept of academic culture	The purpose of the review is to synthesise literature on academic culture, delineate its epidemiological characteristics, and extract definitions of academic culture and the components of its structure.
Context	Studies relating university settings	Studies outside the university context	Due to the essence of academic culture to focus on higher educational institutions
Language	English	Non English	Due to the transformation of academic English into the lingua franca of scientific communication
Time period	Year 2018-2023	Before 2018	To manage resources and to cover newly published sources we focus on 5-year period in order to trace any changes in academic culture definition and its structure
Type of sources	1.Peer-reviewed journal articles 2. Book chapters 3. Editorials 4. Reviews (all types)	1. Non peer-reviewed sources 2. Conference papers	Aim to capture more sources than only peer-reviewed journal articles to fully unpack the definition of academic culture and its structure
Geographic	Any location	None	Due to the global nature of the concept of academic culture

1. Name of the corresponding author.
2. Country of the corresponding author.
3. Year of publication, selecting the most recent date stated.
4. Publication type
5. Name of the journal/ book in which the study was published.
6. Presence of a definition of an academic culture, coded 'no' in case of absence or included in full in case of presence, expressed both explicitly (e.g., "Academic culture is...") and implicitly.
7. Naming of the structural components of academic culture.
8. Commentary on the main focus in the study of academic culture.

Focused Data Extraction

The data extraction was specifically narrowed to sources that provided a definition of academic culture or described its structural components. Opinion pieces or definitions that merely referenced previous works published before 2018 were excluded. For sources meeting these criteria, we extracted text passages that presented a definition of academic culture or described its structural components. This extraction procedure was performed by one reviewer and subsequently verified by a second reviewer. Discrepancies or disagreements encountered during the extraction were resolved by reaching a consensus. In cases where an empirically-based definition of academic culture or its structural components was mentioned multiple times within a source, we selected only one representative excerpt to prevent redundancy.

Goal of Extraction Process

This rigorous and meticulous data extraction process was designed to selectively pinpoint and recognize particular, empirically-based definitions of academic culture. This approach contributes to a more refined and detailed comprehension of its essence and architecture.

Data Analysis

Combined Quantitative and Qualitative Methods

The data analysis employed both quantitative (i.e., frequencies and percentages) and qualitative (i.e., thematic analysis) approaches.

Table 2

Key Information Extracted from the Sources

Publication details	Article 1	Article 2	Article 3
Study title	Employee experience through academic culture emerges as a strongest predictor of overall performance of higher education institutes	Challenges and obstacles of academic culture in institutionalising quality culture in higher education: A Grounded Theory study	Academic integrity in the Muslim world: a conceptual map of challenges of culture
Corresponding author	Pandita A.	Chassabi chorsi M.	Akbar A.
Year of publication	2020	2022	2020
Publication type	Original research	Original research	Integrated literature review
Name of the journal/ book	Journal of Medical Education Development	Journal of Public Affairs	International Journal for Educational Integ
Origin / Country of origin	India	Iran	Indonesia
Purpose of the research	To examine the role of critical success factors for sustainability in the quality of Higher Education Institutes in India	To provide a correct understanding of the challenges and obstacles of academic culture for the beneficiaries	To trigger discussion among policy makers and implementers to address challenges of preserving academic integrity from the perspective of culture
Definition of academic culture	Academic culture is the base for quality teaching and education delivery. Standard academic culture is supposed to be achieved through curriculum harmonisation. Curriculum requires to be is internationally attuned and matching the expectation of students one hand and developing a conducive environment for implementing the changes on the other hand; a critical pathway to reach the performance peak	Academic culture is an independent subculture with its special characteristics in the process of scientific development and performance of the higher education system; a set of beliefs, relationships, tendencies, values, and common affairs that the faculty members, administrators, and other university employees do to improve and ensure the quality of the university's activities	Academic culture is an intellectual and ethical system of values, motivations, beliefs and perceptions
Academic culture structure	Academic culture envelops academic environment and academic operations and covers the broad indicator, that is, teaching and learning environment. "Student experience" covering student engagement, learning assessment, and student satisfaction links to indicators, that is, experiential and research-based studies and international outlook. Employee experience on the other hand covering employee involvement and employee attraction directly influences research and its quality as well as reputation	The academic culture of universities mainly includes academic outlooks, academic spirits, academic ethics, and academic environments; its components are categorised into ten subjects, namely academic independence, academic freedom, professional ethics, management, communication, participation, and teamwork, learning culture, trust between members, reward system, and evaluation system	No
The main focus of the research	Generation of favourable academic culture in universities	Improvement of the quality of academic culture and to enhance its value in the society it is essential to spread and institutionalise quality culture	A synthesis of the literature related to academic integrity and culture in regions where Muslims are the majority
Outcomes	Ideal academic culture helps the organisation to attain a capacity to create its future where student-centred learning will make students more autonomous. Students will become drivers of solutions rather than learners of problems. Employee experience leading to employee attractiveness and branding of the HEIs	According to most theorists, academic culture emerges from the social, political, economic, and cultural structures and relations of that society; as a result, each society forms its own academic culture	It is urgent to address academic integrity from the perspective of culture

Note. A complete data table can be provided by the authors upon request.

Generation of Structural Components List

Initially, the two reviewers responsible for data extraction collaboratively developed a list of potential structural components of academic culture.

Categorization of Extracted Statements

Each statement extracted from the included sources, describing a structural component of academic culture, was categorised according to the previously created list. New categories were added whenever a statement did not fit any existing category. Duplicate statements extracted from a single source were categorised only once. During this process, the specific wording of statements from the studies was not preserved in the categories and themes.

Thematic Analysis and Synthesis

Following the methodology of Galipeau et al. (2016), overlapping or duplicate categories were collated into themes. Two reviewers independently and inductively coded each statement related to the structural component of academic culture, collaboratively developing a coding framework through iterative discussions. The final themes and their definitions were established through a consensus between the reviewers. The data were then recorded with these agreed-upon categories, with any discrepancies resolved similarly. The themes were categorised into two types: structural components of academic culture and substructural components.

Deviations from Study Protocol

Demographic Characteristics Extraction

The extraction of demographic characteristics was conducted twice for accuracy, in line with the initial protocol that recommended a single reviewer's analysis, subject to subsequent confirmation.

RESULTS

Search Results and Demographic Characteristics

The search of bibliographical databases retrieved 9094 results; 8146 were left after restricted by the key words 'culture', 'higher education', 'research', 'academic research', 'universities', 'academic culture', 'academic performance', 'research ethics', 'professional development', 'academic writing', 'academic integrity', 'research culture', 'career', 'academic staff', 'organisational culture'. Search of the grey literature databases retrieved 4 additional documents. See Figure 1 for record and sources flow during the review. The original search entailed 961 records. We excluded 68 records from initial screening because there were duplicates (n = 46), we could not access a full-text document (n = 10), or because they appeared to be irrelevant (n = 12).

We screened a total of 897 title and abstract records obtained from the search strategy. Only 148 were included for full-text screening. 649 records were excluded for not meeting our study inclusion criteria. After full-text screening of the 148 studies, 94 were determined to have full texts and to define academic culture and highlight its architecture. The remaining 54 records were excluded because: they did not have full texts (n = 19), were not about academic culture (n = 30), were published in a language other than English (n = 5). The 94 articles assessed for eligibility and included for demographic data extraction were published between 2018 and 2023 with corresponding authors from 45 countries. These articles were included into the research as they touched upon the concept of academic culture and its components to various extents. The number of publications mentioning academic culture increased each year from 2018 to 2022 (Table 3). The vast majority of these publications took the form of journal articles, book chapters, editorials and reviews.

Among the sources discussing academic culture, only 23 specifically related a study that provided some definitions on academic culture and its architecture. These studies were published between 2018 and 2023 and produced by corresponding authors from 24 countries. The majority of these included studies were journal articles (69.5 %). From the other sources (n = 71) included in the review, we extracted information about the structural components of academic culture implicitly.

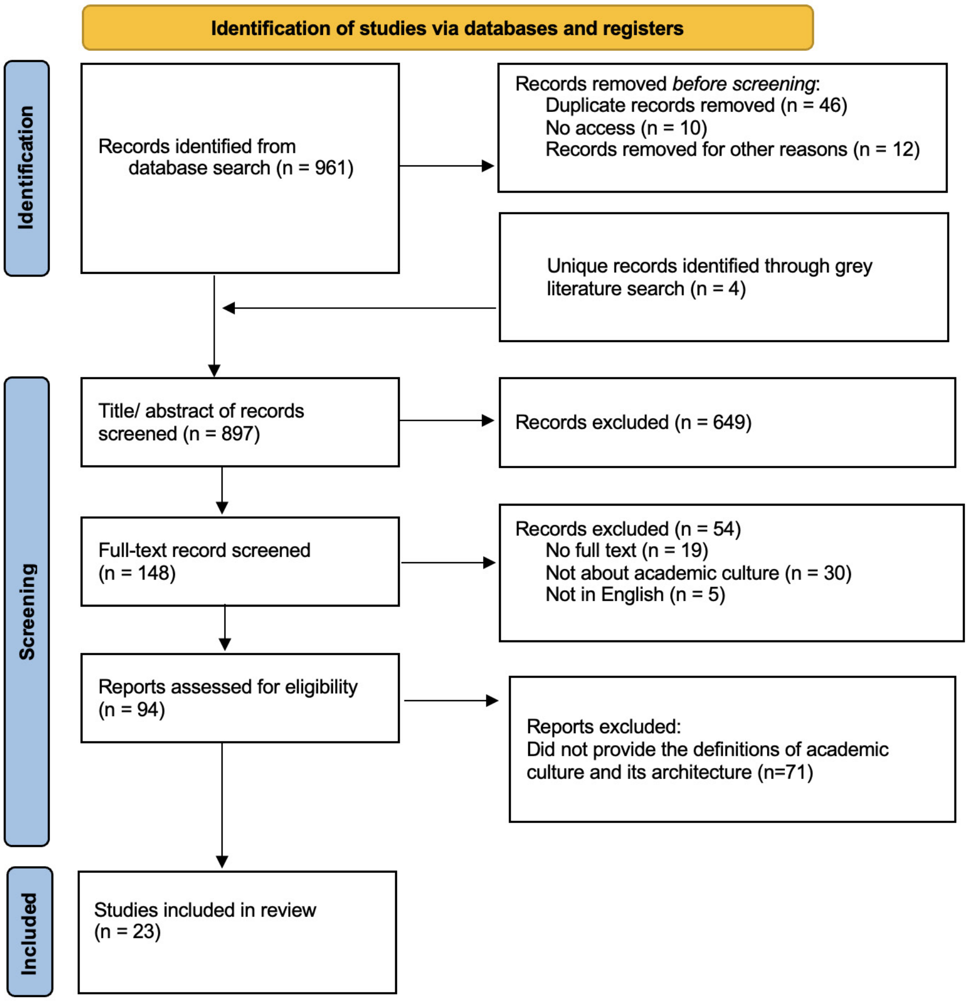
Four additional records obtained from the grey literature search were included into the study as they specified academic culture architecture and provided definitions.

Keywords Analysis

Using the software package VOSviewer, an analysis of key terms was conducted to assess the frequency of usage of a specific term in relation to another. The authors compiled a thesaurus of 760 terms to consolidate similar terms and correct typos in keywords. For constructing a scientometric map, only those keywords that appeared in the dataset at least four times were selected. As a result, the final selection of keywords comprises 35 terms. The visualisation of the results is presented in Figure 2, where the size of an object reflects its total link strength, and the width of the lines indicates the link strength between two terms.

Figure 1

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Flow Diagram



The constructed map highlights four clusters describing different aspects of the development of academic culture. The first cluster is dedicated to the structure and content of academic culture, the second to the educational component of academic culture, the third examines the influence of academic culture on the prospects of professional burnout in researchers and the subsequent consequences for their mental health, and the fourth cluster is also related to the burnout of actors in academic culture, but from the perspective of researchers' stress resilience and characteristics of the academic culture of the university.

Academic Culture Definitions

The absence of a universal term that comprehensively describes the academic culture of a university has led to the existence of a range of competing definitions (Table 4). These definitions, to varying degrees, are synonymous but with a focus on certain structural components of academic culture.

The provided definitions of academic culture might be divided into those that emphasise its educational or research component. At the same time, the studies from which definitions were extracted paid significant attention to the organisational culture of universities, indicating an inseparable link between the university's organisational culture and academic culture. Hence, the triad of organisational culture, educational culture, and research culture forms the fundamental basis of academic culture.

Academic Culture Architecture

Due to the lack of a consensus definition, the structure of academic culture appears quite diffuse, as various scholars define its architecture based on the key aspect of academic culture they emphasise. The main criterion for structuring academic culture is the phenomenon of culture itself. Chassabi Chorsi et al. (2022) include in the structure of academic culture such aspects as the degree of academic freedom, the strictness or flexibility of administrative bureaucracy and regulations, management, and the organisational culture, along with authority delegation. Some scholars hold a similar view, considering components like academic independence, academic freedom, professional ethics, management,

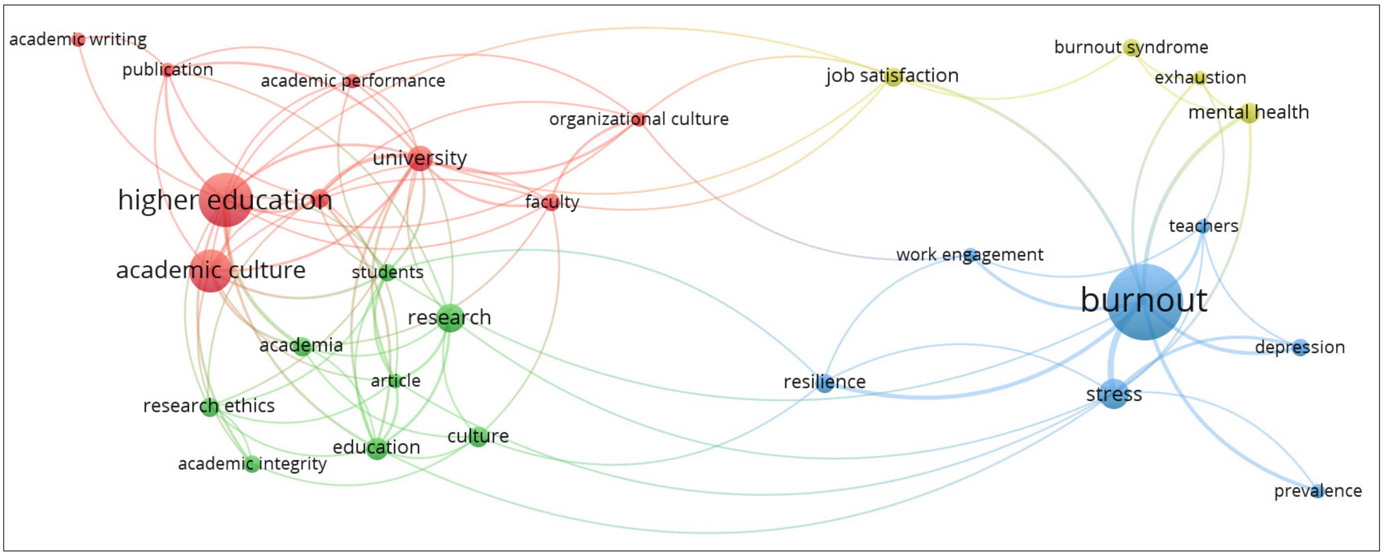
Table 3

Demographic Characteristics of Sources Mentioning Academic Culture and Its Structure

	Sources mentioning academic culture (n=94)	Sources used for unpacking definitions of academic culture and its structure (n=23)
Nationality of corresponding authors (top 3)	USA, UK, Indonesia	USA, Iran, Indonesia
Publication year	2018 - 6	2018 - 2
	2019 - 14	2019 - 2
	2020-17	2020 - 3
	2021 - 13	2021 - 2
	2022 - 25	2022 - 5
	2023 - 19	2023 - 1
Source type	Journal article 82	Journal article 16
	Book chapter 7	Book chapter 5
	Editorial 2	Editorial 0
	Review 3	Review 2

Figure 2

Bibliometric Map of Publications in the Subject Area "Academic Culture" (Tools: VOSviewer, Method: Keyword co-occurrence)



communication, participation, teamwork, learning culture, trust between members, reward system, and evaluation system as integral parts of academic culture (Zaslavskaya et al., 2019; Yang, 2019; Tierney, 2020; Woodman & Pringle, 2022; Karabchuk et al., 2022). Pandita & Kiran (2022) believe that the academic culture of universities primarily encompasses academic outlooks, spirits, ethics, and environments. According to Jiang et al. (2023), academic culture consists of domain knowledge and the know-how of conducting all academic activities. Chervonska & Pashchenko (2022) point out that the key component of the learning academic culture is academic integrity, which should observe five core values in the learning process: honesty, trust, respect, fairness, responsibility, and integrity. Moreover, academic culture includes academic environment and operations, as well as the teaching and learning environment.

The data on the architecture of academic culture, drawn from the sources cited in the review and both explicitly and implicitly stated, is organised in Table 5.

The commentary by the authors on a specific structural aspect of academic culture helped us to discern that its three main structural components (organisational culture, learning culture, and research culture) comprise substructural components that are synonymous in name. However, their content is clearly and specifically defined varying significantly from component to component. For instance, 'academic excellence' in organisational culture is manifested through university achievements, its position in university rankings, whereas 'academic performance' in learning culture implies proficiency in lecturing, methodological work, and individual work with students. In the context of research culture, 'academic performance' is conveyed through scientific leadership in research, laboratory studies, etc.

Focuses in Research on the Academic Culture

Organisational Culture and Organisational Climate

Every educational institution or organisation encompasses its unique structure, management, and culture. In academic and research organisations, the internal culture is a critical element that influences research integrity and the responsible conduct of research (Roje, 2023). Factors such as institutional practices or guidelines, management styles, the research environment, and collaborative dynamics play a significant role. They establish the boundaries of action for researchers and serve as a communal compass, fostering an environment that reinforces integrity through clear policies, reasonable standards for advancement and education, and a supportive work environment conducive to research integrity. Thus, reinforcing the organisational culture is essential for the successful educational and research trajectory of any higher education institution. Despite the clear importance of organisational culture, researchers often find it challenging to distinctly differentiate between the concepts of 'organisational culture' and 'organisational climate'.

Researchers frequently use these terms interchangeably, which can lead to a misrepresentation of the relationships between a culture of an organisation and its climate, its architecture, and its impact on its members. Organisational climate, defined by researchers as the shared perceptions of policies, practices, and procedures experienced by employees, and the behaviours seen as rewarding (Viđak et al.,

Table 4

Definitions of Academic Culture

Source	Reference
Chervonska, & Pashchenko (2022)	Academic culture is a set of values, norms, rules, motivations and beliefs that determine the methods of pedagogical and professional activity in education and science.
Cutri et al. (2021)	Academic culture establishes traditions and norms of conducting scientific research and recording its results (professional identification of the problem, formulation of the hypothesis, conducting research, analysis of the data obtained, confirmation or refutation of the hypothesis).
Çelik & Lancaster (2021)	Academic culture is a system of values, norms, rules, patterns of behaviour, modes of activity, principles of communication based on pedagogically adapted experience of scientific and cognitive activity.
Akbar & Picard (2020)	Academic culture is an intellectual and ethical system of values, motivations, beliefs and perceptions. They define professional activity in the field of education and science as "a set of ways and methods of activity of the university community, their systematically integrated quality, reflecting the achieved level of development".
Bautista et al. (2022)	Academic culture is an intellectual and ethical system of values, motivations, beliefs and ideas that guide professional activity in education and science.
Chassabi chorsi et al (2022)	Academic culture is an independent subculture with its special characteristics in the process of scientific development and performance of the higher education system; a set of beliefs, relationships, tendencies, values, and common affairs that the faculty members, administrators, and other university employees do to improve and ensure the quality of the university's activities.
Leithwood & Sun (2018)	Academic culture is a generalised latent variable composed of academic press (AP), disciplinary climate (DC), and teachers' use of instructional time.
Pandita & Kiran (2020)	Academic culture is the base for quality teaching and education delivery. Standard academic culture is supposed to be achieved through curriculum harmonisation. Curriculum requires to be internationally attuned and matching the expectation of students on one hand and developing a conducive environment for implementing the changes on the other hand; a critical pathway to reach the performance peak.
Yang, 2019	Academic culture represents a distinct climate within academic institutions, such as universities or research institutes. The term 'academic culture' can be understood as representing the culture of a specific academic discipline, such as the field of medical science or the norms, values, and cues embedded among sociologists. Professors and students oftentimes represent an institution as the primary actors of academic culture.

Table 5

Academic Culture Architecture

Organisational Culture	Learning Culture	Research Culture
Core values, norms and traditions	Core values, norms and traditions	Core values, norms and traditions
Academic freedom	Academic independence	Academic independence
Academic environment	Academic environment	Research environment
Organisational climate	Academic climate	Academic climate
Academic excellence	Academic performance	Academic performance
University capacity and productivity	Academic capacity and productivity	Research capacity and Productivity
Academic communication	Academic communication	Academic communication
Academic management and reward system	Self management	Self management
Academic development and career opportunities	Academic development and status	Academic development, status and career opportunities
University collaborations	University collaborations	Research collaboration and data sharing
Professional ethics	Academic integrity	Research ethics
Academic resilience	Academic resilience	Academic resilience
Academic Equity	Academic Equity	Academic Equity
Professional literacy	Academic literacy (academic writing, critical thinking skills)	Academic literacy (digital competencies, research skills and scholarly writing)
Knowledge Construction Management	Knowledge construction (learning technologies)	Knowledge construction

2021; Armond & Kakuk, 2022), acts as a mechanism defining the characteristics of the policy of an organisation.

Equality, Diversity and Inclusion: Equal Opportunities?

Knowledge is a socially distributed phenomenon, situated at the intersection of individual cognitive processes and their operational environments. The creation of knowledge hinges on the interactions between an individual's cognitive schemas and their external contexts. This intersection is further shaped by the use of artefacts within one's background, which guide and mould individual actions (Gomes et al., 2018; Iannaccone et al., 2018; Köse & Korkmaz, 2019). These actions are not standalone; they are intimately woven into the fabric of others' actions within institutional settings that regulate both activities and the dynamics of their interrelationships. Thus, knowledge emerges from a confluence of individual meaning-making processes and the ability to communicate and share these construed meanings, encompassing beliefs, values, and activities (Gomes et al., 2018; Leite et al., 2018; Briody, 2022). In this milieu, the concept of organisational culture of a university and its climate becomes paramount, either fostering or impeding the growth and evolution of its culture. The climate is largely influenced by the backgrounds of the actors in scientific research and educational communication, including their current and future competencies. It's vital to understand that the development level of both organisational and academic cultures significantly impacts the advancement of researchers' competencies.

The diversity within the research environment is shaped not only by the challenges encountered by early-career researchers in the intricate hierarchy of academic relationships but also by factors such as gender, and the interplay of religious and other cultural codes with the realities of organisational and academic cultures (Yang, 2019). These factors heavily influence the prioritisation within the hierarchy of various structural components of academic culture. For instance, the global aspect of academic integrity and research ethics might take a backseat compared to culturally conditioned norms, such as in situations where the order of authorship in scholarly publications is influenced by deference to seniors or adherence to leadership, thus overshadowing globally recognized research ethics standards (Raitskaya & Tikhonova, 2020). The concept of unconscious bias might shed light on the persistence of societal inequities, even in the presence of laws designed to ensure equal opportunities (Tierney & Lanford, 2018; Tierney, 2020).

The notion that higher education institutions are increasingly characterised by a culture of competitiveness, linked to hegemonic masculinity, is gaining traction. This competitiveness highlights the crucial necessity of embracing the ideal of 'belonging', crucial for both success and survival. The hegemonic academic figure is marked by attributes defined by gender, race, and class, with ideal identities expressed and interpreted through proxy indicators, and then communicated through the curation and promotion of an acceptable persona. Therefore, feelings of belonging and legitimacy are mutable, subject to changes in both the academic environment and the individual (Wren Butler, 2022). Academic optimism is increasingly recognized by researchers as a means to overcome the heterogeneity of the academic environment in higher education institutions and as a catalyst for the successful development of higher education in all its aspects (Scott et al., 2023).

Sustainable Research Culture as an Integral Part of Academic Culture

Research culture consists of a collective set of values and essential beliefs regarding research (Falk et al., 2019). Researchers distinguish a 'positive' research culture, emphasising constructive behaviour, collaboration, and openness. On the other hand, they identify a 'negative' research culture, based on excessive competition and insufficient transparency, which may suppress creativity and, ultimately, obstruct scientific progress.

The Responsible Research and Innovation (RRI) framework steers collective efforts towards achieving ethical, sustainable, and socially advantageous research and innovation. This policy approach in science aims to engage a broad spectrum of participants, including academic and industrial sectors, the public, policymakers, and professionals in science, to integrate and refine best practices in line with societal needs and aspirations (AI-Youbi & Zahed, 2020; Canti et al., 2021). This initiative reaches beyond mere scientific involvement to include a wide range of stakeholders like comprehensive research entities, educational organisations, ethics committees, legislative groups, and the general public. The synergy among these groups highlights the importance of communication in this interconnected network. Promoting awareness about the critical role of the translational process in the innovation chain can further motivate collaborative endeavours among these stakeholders. From a policy standpoint, successful translation and market realisation of publicly funded research not only generate socio-economic benefits that mirror the original discoveries (Hishan et al., 2020; Karabchuk et al, 2022) but also validate and encourage ongoing research investments, benefiting both the scientific community and researchers. Crucially, the public benefits from the resultant new treatments, medicines, and technological advances, born from focused funding and efforts (Koz & Lokey-Vega, 2022). Additionally, this model of mutual collaboration gains valuable contributions from external bodies like international research institutes (Kim & Nah, 2018), enhancing the overall process.

Research Integrity and Productivity

Factors influencing the productivity of researchers within higher education institutions are being meticulously studied (Karabchuk et al., 2022). These factors include not only the expectations of the administration, the ambitions of universities to achieve top positions in rankings and become leaders in their fields (AI-Youbi & Zahed, 2020; Karabchuk et al., 2022), but also the specific culture of higher education institutions (Uwizeye et al., 2022). A particular focus is given to the so-called 'culture shock' experienced by researchers when interacting with non-academic environments (Skakni & McAlpine, 2022). The culture of a university, characterised by a clear hierarchy and prolonged decision-making periods requiring collegiality and justification, faces significant challenges when interacting with the real world of business and market relations. This is due to the need for quick decision-making, often at an individual level, taking risks, and committing to specific courses of action without extensive deliberation and justification (Tierney & Lanford, 2018). Once again, individual competencies of researchers receive special attention, the development of which is not only their personal responsibility but also requires institutional support from the organisation. The effectiveness and intensity of this support are determined by the organisational culture of each specific higher education institution (Armond & Kakuk, 2022; Tikhonova & Raitskaya, 2022).

Sustainable Learning Culture as an Integral Part of Academic Culture

Quality management in higher education now integrates knowledge management and is aligned with competency-based approaches (Tierney & Lanford, 2018). The learning culture of a university should evolve from being controlling to fostering a learning-centric environment. The focus of the disciplines studied revolves around understanding cognitive processes, desires, and interpersonal relations, all within an educational setting that encompasses organisational, research, and learning dimensions. Higher Education Institutions (HEIs) gain the ability to shape their future through embracing learning and adhering to the norms of academic culture (Pandita & Kiran, 2022).

The development of a sustainable learning culture is gaining significant importance, particularly one that builds upon the collaboration between academia and industry in science and technology-based innovation. This collaboration, pivotal for global problem-solving, highlights the role of universities and companies in sharing responsibilities, with a focus on human resource development. The pursuit of optimal scientific and practical solutions to these global challenges necessitates reinforced cooperation among universities, research institutions, civil societies, and industrial sectors. This collaboration aims to enhance knowledge levels, technological advancement, practical skills, and productive attitudes within the population. In essence, it seeks to augment the supply of human intellectual capital and improve the efficiency of existing resources (AI-Youbi & Zahed, 2020; Karabchuk et al., 2022). The ability of the higher education system to maintain its effectiveness in challenging situations (such as a pandemic or an unexpected shift in labour market and production priorities) becomes crucial. This requires reliance on a well-developed academic culture and active collaboration between key stakeholders (society, industry, university) (Canti et al., 2021).

To foster a positive academic culture in universities, it is essential to restructure the balance between formal and informal learning processes. Higher Education Institutions (HEIs) that underestimate the value of informal learning miss out on a crucial resource for overcoming intense competition. HEIs are increasingly establishing support centres for teaching and research, which devise innovative strategies to tackle the challenges faced by higher education institutions. For cultivating a high-quality academic culture, these centres play a pivotal role in integrating digital technologies (ICTs) and artificial intelligence into learning and teaching processes. The interaction between management and research is another area where these centres can make a significant impact. However, it is important to acknowledge that technology alone cannot drive innovation. Instead, institutions should focus on nurturing students as independent learners who can effectively apply their acquired knowledge. The goal is to create an environment where change is not viewed as an obstacle but as an opportunity that enhances the learning experience (Pandita & Kiran, 2022).

Academic Culture Models

Cultural models are regarded as the collective ability of a group or community to shape a symbolic dimension around an object or symbol at a certain historical juncture (Marsico, 2018). Such models should not, however, be interpreted as signifying uniformity in the knowledge and belief systems among individuals participating in the same activities within identical contexts. The inherent diversity within social settings and among individuals inherently challenges the notion of cultural models as simply uniform constructs of meaning. Each individual represents a myriad of subcultures, thereby enriching the diversity of cultural models. Acknowledging a spectrum of cultural models is more fitting than confining them to a single archetype, as individuals' construction and interpretation of reality are deeply tied to their unique viewpoints (Mellone et al., 2020). In professional settings, these cultural models guide social and organisational behaviours and play a pivotal role in shaping identity (Marsico, 2018).

In her research, Mollo (2021) outlined four distinct models of academic culture:

(1) Shared Social Construction: emphasises the role of the university in fostering relational and communicative practices, highlighting the interplay of teaching and student relationships in the academic profession. It views professional activity as a joint knowledge-building effort between professors and students, with scientific research being key to enhancing education. Also, it views scientific research as essential for enhancing teaching methods, thereby enriching student education.

(2) The Culture of Development: prioritises research and scientific output in universities, aiming to generate knowledge primarily for research and secondarily for teaching. It views research as a driving force for scientific and cultural progress, central to both the university's and professors' roles. Professors in this paradigm are deeply engaged in research throughout their careers, embodying a dual identity of researcher and educator.

(3) Transmission of Cultural and Scientific Knowledge: assigns universities and their professors the role of disseminating knowledge, practices, and skills to students and collaborators. It blends elements from both the Shared Social Construction and Culture of Development models, focusing on both knowledge building with students and research with workgroups. This model balances research and teaching, reconnecting them to the essence of scientific and cultural exchange.

(4) Training and Research System: the university is viewed as a fusion of education and research. Professors within this framework value research but are primarily driven by the joy of teaching and developing students. Their professional identity is shaped by recognition in academia and their relationships with students, particularly when they feel their teaching positively impacts student development.

DISCUSSION

The purpose of this review was to elucidate the breadth and scope of the term 'academic culture' and to delineate the structure of academic culture. The results indicate a lack of consensus among researchers regarding this issue, despite the long history of the term. The definitions of academic culture we have accumulated show a tendency toward centralising its understanding. For instance, in the bibliographic review by Pedraja-Rejas et al. (2022), the descriptions of academic culture extracted from the studies included predominantly describe the culture of a higher education institution as an organisation. However, the logic of the studies we analysed leads to an understanding of academic culture as a complex phenomenon that includes research culture, organisational culture, and learning culture. Yet, this more centralised understanding is not axiomatic: some authors see the academic culture of a university more as a culture of learning than the triad of research culture, organisational culture, and learning culture discussed above (Akbar & Picard, 2020; Pandita & Kiran, 2022).

Harman (1989) broadly defines the concept of academic culture as the symbolic dimension of organisational life, encompassing the professional life and work of academics across different university contexts. In this interpretation, academic culture as a unified entity vanishes, giving way to a spectrum of distinct academic cultures, each characteristic of a particular university. This iteration of academic culture is described by several researchers (Tierney & Lanford, 2018; Zaslavskaya et al., 2019; Chassabi chorsi et al., 2022; Jiang et al., 2023) as a series of independently existing academic cultures. This perspective is certainly valid and has been influential for a long period, with leading universities setting the standards for the development of organisational culture, incorporating aspects of academic culture not only in their own countries but globally.

In light of the current shifts in the labour market and societal needs, evolving alongside the advancement of nanotechnologies and artificial intelligence, the interpretation of the academic culture of higher education institutions as a metaculture is increasingly substantiated. This perspective enables actors in the educational process globally to establish a transparent and effective educational paradigm rooted in the pursuit and construction of knowledge. This approach is further enhanced by research initiatives and the practical application of their outcomes. Transforming the research process into a leading tool for university development evidently transforms the perception of academic culture, placing expected emphases and strengthening those architectural blocks that are designed to ensure further successful development of each specific university and higher education in general. Undoubtedly, academic culture as a meta-concept will be ineffective without relying on the organisational culture of a specific higher education institution, determined, among other things, by its climate. However, global conventions inherent in the 'ideal' content of academic culture are capable of optimising both the educational and research components of university activities most effectively. Hence, the viewpoint of Chassabi Chorsi et al. (2022), suggesting that the academic culture of universities should be researched as an independent subculture with its special characteristics in the process of scientific development and performance of the higher education system, seems promising.

Any culture, including academic culture, involves the process of differentiation. It serves as a means of indicating not just belonging, but conversely, of indicating who or what is outside of a group. Culture signifies a shared system of meanings and values. The influence and relevance of these systems stem from their ability to delineate who is excluded. This approach continues to evolve through the lens of increasing social differentiation (gender aspects, minorities, young scientists, academic schools) and by highlighting various dimensions and models of academic culture. This review outlines four models of culture identified by Mollo (2021), each based on different balances of teaching and research activities among university faculty and their interactions with students. Integrating these models within a single university by individual actors of academic culture is highly complex. While it is feasible at the management level of academic culture across different university departments, it presents significant challenges at the level of individual practitioners.

For comparison, Harman (1989), building upon Clark's (1983) approach, delineated the levels of academic culture, encompassing a disciplinary field, a specific work place or enterprise, the broader academic profession, and the system of which it is a part. This structuring of academic culture highlights that the culture of an enterprise varies in form and intensity depending on the specific institution. A robust local culture nurtures loyalty and commitment, instilling a sense of belonging and drawing top talent. At the level of the academic profession, Harman (1989) identified commonly shared values and commitments to knowledge creation and dissemination, and to academic freedom, transcending disciplinary and national boundaries and symbolically uniting a diverse global community in higher learning and scholarship. Within specific disciplines, she observed that the various branches of learning, rooted in different epistemological traditions, provide unique cultural frameworks where specialists share beliefs about theories, intellectual styles, and problem-solving methods. This approach, in contrast to Mollo's (2021) models, indicates that each individual within an academic culture cannot embody a singular academic culture. Inevitably, they will combine 2-3 levels of academic culture.

The comparison between the approaches of Mollo (2021) and Harman (1989) reveals the multifaceted nature of defining the content of academic culture, the hierarchy of its components, and the various focuses of its perception. The principal internal complexity of the phenomenon of academic culture is equally evident. Spanning over a decade of research, both approaches concur on the symbiosis of teaching, research, and organisational culture as the foundation of academic culture. This is also evidenced by the primary research focuses identified in the reviewed articles. To varying degrees, they touch upon the three aspects of the identified triad, demonstrating the interdependence of the three key components of academic culture.

Sources analysed in this review highlight the variety of components that contribute to the hierarchical structure of academic culture. However, there is a lack of uniformity in the structural components identified by different researchers, underscoring the need for a more standardised approach to its conceptualization. In this regard, the perspective of Chassabi Chorsi et al. (2022) gains special importance. They propose that academic environments encompass both 'hardware' and 'software' aspects. The 'hardware' environment includes tangible resources supporting academic research and activities, such as infrastructure, general and specialised equipment, research sites, informational resources, communication and exchange opportunities, essential living facilities, stable teaching and research spaces, and financial resources for research and collaboration. On the other hand, the 'software' environment encompasses the intangible aspects, particularly the academic culture rooted in the academic climate of the institution. This dual perspective encapsulates the physical and the cultural-psychological elements, offering a comprehensive view of the academic environment.

Once again, the interrelation of organisational culture, learning culture, and research culture emerges as a unified foundation of academic culture. The effective functioning of the 'hardware aspect' - encompassing the physical and structural elements of the academic environment - relies heavily on the presence of a robust organisational culture. Conversely, the 'software aspect', which involves the intangible elements such as values, beliefs, and intellectual approaches, is dependent on the thriving cultures of learning and research. Without these cultural aspects, the essential human and intellectual dimensions of academia cannot be fully realised or activated.

Limitations

In this study, only English-language sources were analysed, which may limit the opportunities for conceptualising existing approaches to defining and structuring academic culture.

As many authors use the terms 'organisational culture' and 'academic culture' interchangeably, the authors of this review had to carefully weigh and analyse the information presented in the sources in order to transparently differentiate the scope of these concepts without contradicting the interpretations given by the authors of the analysed studies.

The overall structure of academic culture presented by the authors, built both on the explicit and implicit extraction of information, requires further clarification and specification in terms of the three main components included, as well as in terms of synchronising their subcomponents considering their content difference specified by the exact component of the analysed triad.

CONCLUSION

The purpose of this review was to trace the transformation in the definition and structural components of academic culture. Despite the variety of approaches to its definition, there is a common recognition of its impact both at the level of its actors and at an organisational level. Academic culture encompasses not only educational and research components but also includes crucial aspects such as organisational structure, the climate within educational institutions, and the interaction between personal and professional qualities of participants in the educational process. The study of academic culture has revealed that cultural models in the educational environment are not homogeneous and can vary depending on a multitude of factors, including gender characteristics, cultural codes, and historical contexts. This underscores the need for an individualised approach to understanding academic culture in various higher education institutions.

A key point is the recognition that academic culture is a dynamic and continually evolving system. It requires the active participation of all stakeholders in its formation and support. The interaction between researchers, students, and administrative staff plays a central role in creating an environment that fosters integration, knowledge exchange, and overall development. Defining and understanding academic culture necessitates considering a wide range of its aspects, not only structural components but also the dynamics of interactions within the academic community.

Further research should focus on formulating a unified definition of academic culture and constructing its balanced and hierarchically organised architecture. A particular emphasis should be placed on understanding academic culture as a metaculture, to clarify the levels distinguished within academic culture.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Elena Tikhonova: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

Marina Kosycheva: Data curation; Formal analysis; Resources; Writing – original draft; Writing – review & editing.

Petr Kasatkin: Data curation; Investigation; Methodology; Resources; Writing – original draft; Writing – review & editing.

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Organising Rhetorical Components in Verbal Presentation of Scientific Research Outcomes: A Systematic Scoping Review

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ABSTRACT

Background: The rhetorical structure of various genres of written scientific communication has been extensively covered in articles by contemporary researchers from different countries. However, the rhetorical structure of oral scientific presentations accompanying the presentation and defence of graduation theses, scientific research, and others has not received the same level of detailed study and attention. Nevertheless, the effectiveness of presenting conducted research significantly influences the degree and depth of its further acceptance by the readership.

Purpose: to summarise the literature on the rhetorical structure of verbal presentation of scientific research results accompanied by a presentation.

Materials and Methods: We conducted a search of the Scopus bibliographic database on March 2nd, 2023, and carried out a related grey literature search on March 27th, 2023. We screened the titles and abstracts of the retrieved records. From these records, we extracted demographic characteristics related to the rhetorical structure of oral presentations representing scientific research results. Following this, we extracted passages from empirical studies that described empirically derived moves and steps in speeches during oral presentations. These moves and steps were summarised and presented in the form of a universal matrix for the oral presentation of scientific research results

Results: In the result of the search request 63 articles were found. Having screened all the papers we revealed that only 11 of them met our predetermined inclusion criteria. All these papers were journal research articles. It is worth stating that the majority of the studies were dedicated to rhetorical structure in written presentation of scientific research outcomes and there is a lack of papers related to moves and steps of verbal presentation of scientific research outcomes.

Conclusion: This systematic scoping review identified the moves and steps highlighted by authors in the reviewed articles within the oral speech accompanying the presentation of scientific research results to an audience. This matrix can be used to construct a more effective oral presentation of scientific research outcomes. Limitations of the work include the restriction to English language articles and the fact that the methodological quality of the articles included in our extraction was not assessed.

KEYWORDS

academic verbal presentation, academic oral presentation, moves and steps, rhetorical structure, rhetorical component

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INTRODUCTION

Rhetorical structure of various genres of written scholarly communication has gained vast popularity and received the attention of many researchers. To investigate the rhetorical structure of different genres of written scholarly communication many researchers concentrate on the genre-based approach developed by Swales (Swales, 1990; Swales, 2004). Researchers have thoroughly explored the rhetorical structure of moves and steps in various genres of scholarly communication, illuminating their most effective architecture through the lens of different scientific disciplines' scope (Tikhonova et al., 2023a; Tikhonova et al., 2023b). Recently, there has been a growing focus on examining the rhetorical structures within various sections of academic articles, particularly research papers, across different disciplines. Studies have been conducted to identify and detail the specific moves and steps in sections such as abstract (Gobekci, 2023; Galaidin & Bednárová-Gibová, 2003; Zibalas & Šinkūnienė, 2019; Abdollahpour & Gholami, 2019), introduction (Lu et al., 2021; Aleshinskaya, 2023), and results and discussion (Tikhonova et al., 2023; Thanajirawat & Chuea-nongthon, 2022; Živković, 2022; Amirian et al., 2008; Al-Shujairi & Al-Manaseer, 2022). Additionally, some research has been devoted to understanding the rhetorical organisation of academic book reviews (Motta-Roth, 1998; Junqueira, 2013; Šandová, 2018), with Živković (2022) specifically investigating the rhetorical structure of university lecture introductions.

Academic written works and their oral presentations represent two interlinked yet distinct facets of academic communication. Oral presentation, a crucial spoken genre in this field, is a vital skill for both early researchers and experienced academics. It involves the presentation of well-structured and coherent research ideas, issues, and findings to both specialised and general audiences. In such presentations, researchers are given a platform to share observations, introduce hypotheses, display and interpret study results, or summarise existing knowledge and upcoming research trajectories in their field (Alexandrov & Hennerici, 2012).

Every form of communication aims for effectiveness, meaning it should help the communicator achieve their objectives (Kourkouta & Papathanasiou, 2014). Likewise, a scientific oral presentation, recognized as a genre within academic communication, possesses specific goals it seeks to accomplish (Kaur & Mohamad Ali, 2017). A primary objective of a scientific oral presentation is to engage the audience, convey knowledge and ideas with clarity and logic, and ensure the audience comprehends the research effectively. Success in such presentations hinges not just on the content but also significantly on the presenter's ability to structure the information engagingly (Watson, 2014). Employing rhetorical moves and steps effectively can enhance the presentation performance, allowing for a seamless transition through the introduction of the research context, clarification of the message, and fostering a connection between the presenter and the audience.

However, the rhetorical structure of verbal scholarly communication such as speech following presentation during defence of graduation theses, performance of scientific research results at conferences, and others has not received the same level of detailed study and attention as written forms of scientific communications (Chang & Huang, 2015; Kaur & Mohamad Ali, 2017; Ducasse & Brown, 2023).

The purpose of the current review is to summarise the literature on the rhetorical structure of a verbal presentation of scientific research results accompanied by a presentation. The Systematic Scoping Review was selected as the most representative and objective tool for defining the scope of the research on the stated issue, allowing for the synthesis of extracted data into a new dataset (Raitskaya & Tikhonova, 2020).

METHOD

Transparency Statement

We performed a literature search in Scopus databases and conducted a systematic scoping review as per the guidelines of the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews). The following methods were used for the search and the study selection.

Search Strategy

Search Sources

The search was performed between March 2 and 27, 2023. For the search outcomes of Google Scholar, only the first 100 results were considered, as, beyond the first 100 entries, the search results were quickly losing match and relevancy to the topic of the review. In addition to the search on the databases, we also screened the reference lists of the included studies to find additional relevant studies.

Search Terms

We defined the search terms from the available literature and by referring to the experts in the fields. The search strings used in this study are the following: "rhetorical structure of an oral presentation", "oral presentation structure", "oral presentation structure", "rhetorical moves of an oral presentation", "moves in an oral presentation", "oral presentation moves".

Search Eligibility Criteria

We considered studies published in English from 2018 to 2023. The reliance on research published in English is due to the transformation of academic English into the lingua franca of scientific communication (Tikhonova et al., 2023b). The choice of language, therefore, does not narrow down the pool of articles, but rather maximises its expansion and provides the opportunity to gain a comprehensive view of the research issue (Raitskaya & Tikhonova, 2019). Studies for all types from any discipline captured by our search were included. Our results comprised research articles and excluded preprints, commentaries and other non peer reviewed articles. No restrictions were imposed on the country of publication. For more details see Table 1.

Table 1
Eligibility Criteria

Criterion	Inclusion	Exclusion	Justification
Population	Studies describing the rhetorical structure of a verbal scientific presentation	All studies that fell outside the defined scope of research were excluded from the review	The need to obtain a focused description of moves and steps in a verbal presentation of scientific research results predetermined the exclusion of all sources that do not describe moves and steps
Concept	Studies, including journal articles, which discuss explicitly moves and steps in a verbal presentation of scientific research results	Studies which do not relate to the description of the rhetorical structure of a verbal presentation of scientific research results	The aim of the research is to summarise the literature on the rhetorical structure of a verbal presentation of scientific research results
Context	Studies relating to a verbal presentation of scientific research results at a university	Studies outside the university context and not related to the rhetorical structure of a verbal presentation of scientific research results	Due to the essence of academic communication to focus on higher educational institutions
Language	English	Non English	Due to the conversion of academic English into the lingua franca of scientific communication
Time period	Year 2018-2023	Before 2018	To obtain the data from the newly published sources we focus on 5-year period
Types of sources	1.Peer-reviewed journal articles	1.Non peer-reviewed sources	To analyse empirically derived moves and steps in speeches during oral presentations.
Geographic	Any location	None	The objective is to gain an international perspective on the phenomenon

Eligibility Criteria

Study Selection

Two reviewers independently reviewed the titles and abstracts of the studies identified in the search and made initial flagging for inclusion and exclusion. The flagging was then verified by a third reviewer. The studies that passed the title and abstract screening were shortlisted for the full-text reading phase to perform study selection. Any disagreement between the reviewers was investigated and resolved through discussion and consensus.

Data Extraction

We prepared a purpose-built form for data extraction. Table 2 presents the data extraction form. The entries for the form were pilot-tested using ten relevant studies to extract the data accurately. Two reviewers independently performed the data extraction according to this form. Any disagreement between the two reviewers was resolved through discussion and consensus.

Data Synthesis

Following the data extraction from the selected studies, we employed a narrative synthesis approach. Initially, we categorised the studies based on the identified moves and steps within them. Utilising the moves and steps highlighted by the researchers whose articles were included in the review, we synthesised these elements into a universal matrix. This matrix facilitates the most effective presentation of scientific research results. The data synthesis process was conducted and organised using MS Excel.

RESULTS

Search Results and Demographic Characteristics

Our bibliographic database search yielded a total of 63 results. After applying keyword restrictions, 11 documents remained for consideration. Figure 1 illustrates the flow of records and articles throughout the review process. The initial search produced 63 records. From these, we excluded 52 records during the initial screening due to various reasons: duplicates (n = 13), inability to access full-text documents (n = 5), or irrelevance to the research topic (n = 34).

In our research, we screened 11 titles and abstracts sourced from our search strategy. The majority of these publications were journal articles and reviews. Among the 11 scrutinised in detail, only 5 were selected for full-text examination describing the rhetorical structure of oral academic presentations through moves and steps, while 6 were excluded as they did not meet our inclusion criteria. The excluded 6 records fell into two categories: irrelevance to the purpose of this review (5 records), and non-English publication language (1 record). The 5 chosen sources, published from 2018 to 2023, featured contributions from authors across 3 countries. These sources were selected based on their relevance to the rhetorical structure of oral presentation of the research results. No increase in publications mention-

Table 2

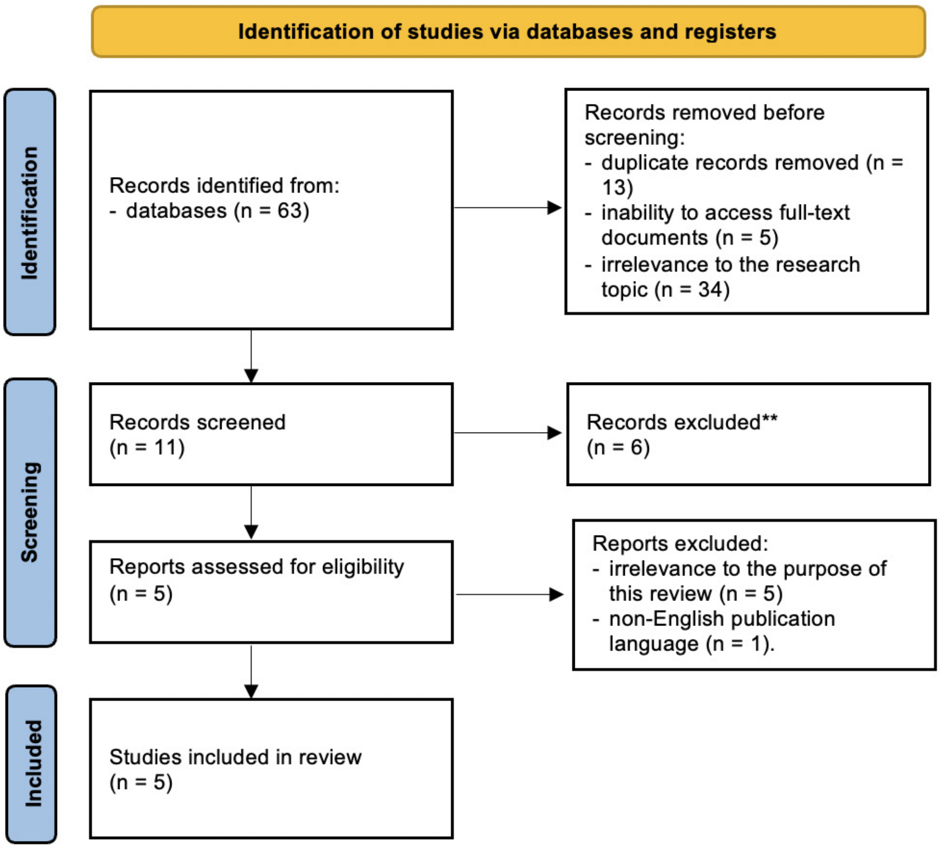
Key Information Extracted from the Articles

Publication details	Article 1	Article 2	Article 3	Article 4	Article 5
Study title	Communicating disciplinary knowledge to a wide audience in 3MT presentations: How students engage with popularisation of science	A Genre-Based Investigation of the Introduction Sections of Academic Oral Presentations	Rhetorical Structure Mastery of Tertiary Students' Speech: Challenges and Possible Solutions	The Rhetorical Structure of Students' Presentation in Speaking Class	Three minute thesis presentations as an academic genre: A cross-disciplinary study of genre moves
Authors	Feng (Kevin) Jiang Xuyan Qiu	Kuldip Kaur Mei-Yuit Chan Afida Mohamad Ali	Syafryadin Andy Makhrian Dian Eka Chandra Wardhana	Heryanti Novitasari Syafryadin Dedi Sofyan	Guangwei Hu, Yanhua Liu
Year of publication	2022	2019	2023	2022	2018
Publication type	Research article	Research article	Research article	Research article	Research article
Name of the journal	Discourse Studies	Asian Journal of University Education (AJUE)	Studies in English Language and Education	ENGLISH FRANCA: Academic Journal of English Language and Education	Journal of English for Academic Purposes
Origin / Country of origin	China	Malaysia	Indonesia	Indonesia	China
Purpose of the research	to investigate the rhetorical organisation of moves (i.e. discoursal units serving various coherent communicative functions in text) in 80 3MT presentations from six disciplines.	to compare the rhetorical structure of the introduction sections of academic oral presentations from two different fields, namely English language and Administrative Sciences.	to explore the students' mastery of rhetorical structure in making a speech, their challenges, and potential solutions.	to find the rhetorical structure of Move and Step which are often found in the Speaking for Presentation class.	to establish the rhetorical moves of the 3MT genre and their instantiation across broad disciplinary groupings (i.e., hard/soft and pure/ applied) to explore factors shaping generic variation.
Moves description	1.Orientation 2.Rationale 3.Purpose 4.Methods 5.Results 6.Implication 7.Termination	1.Listener orientation 2.Content Orientation	1.Introduction 2.Content 3.Closing	1.Introduction: A – listener orientation B – content orientation 2.Body 3.Conclusion	1.Orientation 2.Rationale 3.Framework (The authors claim that it is the least frequent move) 4.Purpose 5.Methods 6.Results 7.Implication 8.Termination

Steps description	-	Step 1A Greeting the audience Step 1B Reciting Prayer Step 1C Introducing oneself / other speakers Step 2A Leading audience into content Step 2B Announcing topic of oral presentation Step 2C Outlining structure / Indicating scope	-	Step 1A. Greeting the audience Step 1B. Reciting Prayer Step 1C. Introduction of oneself / another speaker Step 1D. Leading the audience into the content Step 1E. Announcing the topic of the oral presentation Step 1F. Outlining structure/ Indicating scope Step 2A. Hortatory/ narration Step 3A. Summarising the points/ conclusion Step 3B. Suggestion Step 3C. Invite question Step 3D. Thank you	-
Type of presentation	3MT (Three-minute thesis) presentations	Introduction Section of Oral Presentation	Tertiary Students' Speech	Undergraduate students' oral presentations	Three Minute Thesis (3MT) presentations

Figure 1

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Flow Diagram Summarising Study Selection



ing rhetorical structure was observed from 2018 to 2023, as detailed in Table 3. Specifically, these 5 sources directly described the rhetorical structure of oral presentations of scientific research findings, with journal articles constituting100 % of this subset.

Rhetorical Structure of Oral Academic Presentations Following Students' Thesis Outcomes

Our scoping review on rhetorical structure of verbal academic presentations showed some differences in terms of describing the number of rhetorical moves. Here we can observe two sets of moves in oral academic performances: a detailed set of moves with a broader classification of moves and a shortened set of moves with a limited number of moves. One more obvious fact that attracts attention is that rhetorical moves are divided into steps in only two out five articles. Another observation that should be mentioned is related to the fact that one out five work describes moves just in the introductory part of oral academic presentations while others focus on moves of the whole speech. The volume of moves and steps outlined by the authors is given in Table 4.

Detailed Rhetorical Structure of Oral Presentation

The models developed by Hu & Liu (2018) and Jiang & Qiu (2022) offer a comprehensive moveset for oral academic presentations, focusing solely on moves without incorporating steps. In their framework, each move is designed to fulfil specific functions in the presentation, creating a clear and effective flow of information. These moves are deliberately arranged to guide the presenter through the various stages of the presentation, from introduction to conclusion. By identifying and defining these distinct moves, the authors provide a structured approach to crafting and delivering oral academic presentations, ensuring clarity and engagement throughout the delivery process. The proposed model serves as a valuable tool for researchers and academics, aiding them in conveying their research findings and ideas in a coherent and impactful manner.

Move 1. Orientation: this initial move according to Hu & Liu (2018), Jiang & Qiu (2022) and Kaur et al. (2019), is multifaceted, serving several key purposes. Primarily, it is designed to captivate the audience's attention. This is achieved by effectively orienting the listeners towards the central research topics, thereby establishing a clear context for the discussion that follows. Additionally, this move is critical in setting up the structural framework of the oral presentation, ensuring that the audience understands the layout and flow of the content to be delivered. It also serves as a preparatory step, laying the groundwork for the subsequent moves in the presentation. This approach ensures that the audience is not only engaged but also well-informed about the direction and scope of the presentation, facilitating a more meaningful and impactful exchange of ideas.

Move 2. Rationale: this move delving into the rationale behind the research (Hu & Liu, 2018; Jiang & Qiu, 2022) is crucial for contextualising the study within its broader field. It involves articulating the motivation behind the research by identifying existing gaps, unresolved challenges, or specific

Table 3

Demographic Characteristics of the Sources

	Sources mentioning rhetorical structure of oral presentations (n=11)	Sources used for creation moves and steps unified description for oral presentation(n=5)
Nationality of corresponding authors (top 3)	Malaysia: 3	Malaysia: 1
	Indonesia: 4	Indonesia: 2
	China: 2	China: 2
	Spain: 1	
	Sweden: 1	
Publication year of sources	2018 - 2	2018 - 1
	2019 - 1	2019 - 1
	2020- 2	2020 - 0
	2021 - 0	2021 - 0
	2022 - 2	2022 - 2
	2023 - 3	2023 - 1
Source type	Journal article	Journal article
	Review	

Table 4

Models of Rhetorical Structure of a Verbal Presentation of Scientific Research Results

Detailed Rhetorical Structure of Oral Presentation	Move 1. Orientation Move 2. Rationale Move 3. Purpose Move 4. Methods Move 5. Results Move 6: Implication Move 7: Termination
Shortened Rhetorical Structure of Oral Presentation	Move 1. Introduction: Step 1. Greeting the audience. Step 2. Introduction of oneself /another speaker. Step 3. Leading the audience into the content. Step 4. Announcing the topic of the oral presentation. Step 5. Outlining structure / Indicating scope. Move 2. Body or Content: Step 1. Hortatory / narration. Move 3. Closing and conclusion: Step 1. Summarising the points / conclusion. Step 2. Suggestion. Step 3. Invite a question. Step 4. Thank you.

needs that the study aims to address. The effective communication of this move is integral to establishing the significance and urgency of the research. Hence, it helps the audience understand why the research is essential, what specific issues it seeks to tackle, and how it contributes to the field. By clearly highlighting these elements, the presenter sets the stage for a deeper engagement with the audience, fostering an appreciation for the relevance of the research and its potential impact.

Move 3. Purpose: as outlined by Hu & Liu (2018) and Jiang & Qiu (2022) this move focuses on articulating the purpose of the research. In this move, the presenter is expected to clearly define the objectives of the study or pose specific research questions. This move is fundamental to providing the audience with a clear understanding of what the research aims to achieve or uncover. By explicitly stating the research purposes and objectives, the presenter guides the audience's expectations and sets a lucid direction for the presentation. This move is not just about informing the audience but also about framing the research within a specific scope and focus. It helps the audience to align their understanding with the presenter's intentions, creating a roadmap for what is to follow in the presentation. Effective communication in this move is crucial for maintaining audience engagement and interest, as it establishes the core inquiry that drives the research.

Move 4. Methods: this fourth move in an oral academic presentation revolves around the presentation of the study's methods. In this section, the presenter explains how the research was conducted. This includes detailing the materials, methods, or approaches used in the study and often justifying why specific choices were made (Hu & Liu, 2018; Jiang & Qiu, 2022). This move is urgent for establishing the credibility and rigour of the research. By elucidating the methodology, the presenter allows the audience to understand the underlying framework of the study, including its experimental design, data collection procedures, and analysis techniques. What is more, justification for the chosen methods is equally important, as it demonstrates thoughtfulness and intentionality in the research design, addressing potential queries or doubts the audience might have regarding the suitability or efficiency of the research methodology. The "Methods move" not only informs but also lends transparency to the research process, allowing the audience to assess the validity and reliability of the results. It is an opportunity for the presenter to reinforce the scientific rigour of their work and to contextualise the findings within the scope of the selected methodologies.

Move 5. Results: as delineated by Hu & Liu (2018) and Jiang & Qiu (2022), this move is focused on presenting the results of the research. In this move, the presenter communicates the findings of the study to the audience. This involves detailing the outcomes, discoveries, or data that have emerged from the research process. The “Results move” is a pivotal part of the presentation, as it reveals the empirical evidence or data that the research has yielded. It is where the presenter showcases the direct outcomes of their investigative efforts. The results can include quantitative data, qualitative observations, statistical analyses, or any combination of these, depending on the nature of the study. This move is crucial as it provides the audience with concrete information about what the research has uncovered or verified. Moreover, it is the moment when the audience realises if the research questions or hypotheses have been answered or supported. The efficiency of this move lies in how clearly and succinctly the presenter can convey complex data or findings to the audience, making it accessible and understandable. The aim is not just to inform but to engage the audience with the significance of the research findings, setting the stage for the subsequent discussion or conclusion.

Move 6: Implication: Hu & Liu (2018) and Jiang & Qiu (2022) stressed that this move is essential as it extends beyond simply presenting research findings; it involves interpreting these findings, discussing their broader implications, and highlighting the significance of the study and contributions to the field. This move may also include offering recommendations based on the research outcomes. In the “Implication move”, the presenter interprets the results, providing an understanding of what these findings mean within the larger context of the field or study area explaining the relevance and impact of their research, connecting the dots between their findings and existing knowledge or practices. By doing so, the presenter situates their study within a broader scholarly conversation, showing its relevance and importance. Moreover, the “Implication move” often includes recommendations or suggestions for future research, practical applications, or policy implications. Overall, the “Implication move” is integral to the presentation as it showcases the impact of the study and provides a vision for its potential future trajectory and application.

Move 7: Termination: This move is primarily focused on concluding the presentation effectively. Hu & Liu (2018) and Jiang & Qiu (2022) suggest that a key aspect of the “Termination move” is to express gratitude towards the audience for their attention and participation. It is a formal and courteous way to bring the presentation to a close, acknowledging the audience’s presence and engagement. This move helps in leaving a lasting, positive impression, and signifies respect and appreciation for the audience’s time and interest in the research being presented.

Shortened Rhetorical Structure of Oral Presentation

Heryanti et al. (2022) and Syafryadin et al. (2023) proposed a trinary moveset consisting of following moves:

Move 1. Introduction: Heryanti et al. (2022) and Syafryadin et al. (2023) are unanimous with Hu & Liu (2018) and Jiang & Qiu (2022) in terms of Introduction move functions. Kuldip et al. (2019) and Heryanti et al. (2022) also proposed following rhetorical steps of the move “Orientation”:

Step 1. Greeting the audience.

Step 2. Introduction of oneself /another speaker.

Step 3. Leading the audience into the content.

Step 4. Announcing the topic of the oral presentation.

Step 5. Outlining structure / Indicating scope.

Move 2. Body or Content: Heryanti et al. (2022) sees body or content section as a single-step and claims it is to be “Hortatory / narration”.

Move 3. Closing and conclusion: Heryanti et al. (2022) divided the last move into four steps:

Step 1. Summarising the points / conclusion.

Step 2. Suggestion.

Step 3. Invite a question.

Step 4. Thank you.

DISCUSSION

Our study aimed to summarise the literature on the rhetorical structure of oral presentations of scientific research results, accompanied by a presentation. We found that there is a lack of well-developed rhetorical structures for different genres of oral scientific communication. There is no universal pattern that comprises the same set of moves and steps within a specific part of the presentation. Research like Kaur & Ali (2017) has shown that the rhetorical structure of oral presentations varies across different contexts, such as conference presentations, lectures, and classroom presentations. Most research primarily focused on specific parts of the presentation (introduction, body, or conclusion) rather than the entire presentation. Similarly, Kaur et al. (2019) also concentrated on the introduction of oral presentations, highlighting the significance of this section, possibly due to the ease of applying Swalesian moves to these parts. However, the lack of a clearly defined rhetorical structure for different genres of oral scientific communication hinders the deep understanding of each section significance by novice researchers.

Analysing rhetorical structures from selected sources revealed that authors typically differentiate between two sets of moves and steps. Our detailed rhetorical structure, based on Hu & Liu (2018) and Jiang & Qiu (2022), does not contain steps but uses a significant number of moves to cover system-forming moments of the oral presentation and establish perception landmarks for the audience. In contrast, a shortened rhetorical structure is characterised by fewer moves but compensates by including steps that form a system of signposts. Moreover, some moves within different sections have been generalised; for instance, moves and sub-moves in the Termination section, initially described in Seliman's model (1996), were more detailed.

Researchers have noted culturally and nationally specific steps in the rhetorical structure of oral presentations. Singh and Ali (2019), for instance, highlighted the need to include reading a prayer as a separate step after greeting the audience. They even provided recommendations on properly structuring this step: the presenter should invite the audience to say a prayer before starting the presentation. While these steps are crucial within certain national cultures, in the context of global scholarly communication, such nuances may diminish the effectiveness of information reception by the audience.

Both models we constructed based on sources in our review represent a further step in studying the rhetorical structure of oral scientific discourse. Kaur & Ali (2017), in their critical review, concluded that moves across various sections of oral presentations, whether obligatory or optional, were inconclusive as a pattern. Such studies are undoubtedly important as they stimulate scientific discussion on the issue, but it is crucial to ensure that the academic community moves forward rather than continually summarising axiomatic truths. Kaur & Ali (2017) set the tone for understanding the need to establish universal models for constructing rhetorical structures. It is important to build such models based on a clear understanding of the function of each genre of oral scientific communication. This will achieve maximum transparency and functionality in presenting information and ensure audience attention and a lively question-and-answer session.

We agree with Ducasse & Brown's (2023) view that oral presentation tasks cannot be described as a "genre» in the same way as academic writing. Oral academic discourse involves engaging the audience in discussion, and, moreover, these presentations have their language restrictions and structure requirements (Yusoff, 2010). Each field has its rules for presentation delivery. Their structure, however, reflects the IMRAD structure of research articles (Zappa-Hollman, 2007).

A limitation of our study is the relatively modest number of sources used to construct the two models described. The majority of articles in our sample only mentioned the rhetorical structure of oral presentations without exploring moves and steps in detail. Nevertheless, the actual picture of researchers' interest in the topic is crucial, allowing us to assess the prospects for the development of discursive studies. Even such a limited sample enables us to track the evolution of the topic. The limited sample size prevented us from using data visualisation software, due to the lack of sufficient data.

CONCLUSION

The goal of this systematic scoping review was to consolidate and analyse the existing literature on the rhetorical structure of verbal presentations of scientific research results, specifically those accompanied by a presentation. Our findings reveal the presence of two distinct models of moves and steps in verbal presentations, particularly in the context of defence sessions where a universal rhetorical model is absent. Additionally, we were able to identify both obligatory and optional moves, which, while following a linear process, exhibit flexibility similar to other genres of academic discourse. This gathered information not only paves the way for future research in this area but also has practical implications. It can assist students in developing proficiency in oral presentations, thereby enhancing their success in academic environments. The insights gained from this review contribute to a deeper understanding of effective communication strategies in academic settings, emphasising the significance of adaptability and strategic organisation in delivering impactful presentations.

Considering the identified limitations in existing research on the rhetorical structure of academic oral presentations, there are several essential directions for future research. First, there is a need for exploration of different sections of presentations, closely tied to the functionality of the specific genre of verbal presentation. Additionally, exploring novice and peer contexts is crucial, focusing on the rhetorical structure in academic settings where both the presenters and the audience are students or novices. This approach can reveal insights into how early researchers develop and use rhetorical strategies. Performing cross-cultural studies is also important to investigate how cultural differences impact the rhetorical structure of academic presentations, which would be valuable in understanding global variations in academic communication. Another significant area is tracking technology integration to examine how the use of digital tools and multimedia in presentations affects the rhetorical structure and audience engagement. Lastly, investigating virtual and hybrid formats is pertinent, especially with the rise of virtual and hybrid academic events, to understand how these formats influence rhetorical structures and audience engagement. These research areas would contribute significantly to a more nuanced understanding of rhetorical structures in academic verbal presentations, catering to a variety of contexts and disciplines.

DECLARATION OF COMPETITING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Marina Ivanova: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Writing – original draft; Writing – review & editing.

Nataliya Mekeko: Methodology; Project administration; Resources; Supervision; Writing – original draft.

Nadezhda Arupova: Data curation; Formal analysis; Investigation; Resources; Writing – original draft; Writing – review & editing.

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Teacher Development in Technology-Enhanced Language Teaching: Book Review

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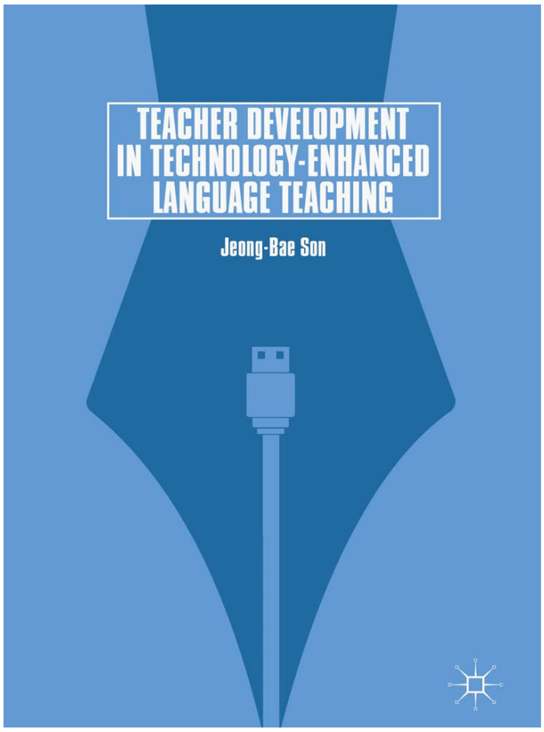
Teacher development in technology enhanced language teaching, by J. B. Son, Palgrave Macmillan, 2018, 233 pp., US $ 64.84 (Hardcover), ISBN 978-3-319-75710-0, (e-Book) ISBN 978-3-319-75711-7



«Teacher Development in Technology-Enhanced Language Teaching» by J. B. Son is a valuable resource for language teachers seeking to integrate technology into their classroom practices. Published by Palgrave Macmillan, the book delves into the challenges faced by language teachers when integrating technology and provides insights into overcoming these challenges through teacher development programs. Specifically focusing on language teacher development in computer-assisted language learning (CALL) environments, the book offers various approaches, tasks, and resources to guide language teachers in developing their skills and strategies for technology-enhanced language teaching (TELT). The author, J. B. Son, offers a practical and accessible approach to teacher development and technology integration, making the book an essential read for language teachers aiming to enhance their TELT skills and strategies. By an «accessible approach,» it means that the author provides clear and easy-to-understand methods and strategies that are readily applicable to language teachers. This approach ensures that educators, even those with varying levels of technological expertise, can effectively implement technology into their teaching practices and enhance their TELT skills.

Moreover, "Teacher Development in Technology-Enhanced Language Teaching" serves as a valuable resource for individuals interested in learning about TELT and those who wish to teach this subject to teacher trainees. With the author's expertise in computer-assisted language learning (CALL) evident throughout, the book presents practical ideas and insights to effectively implement TELT in teacher education. The text not only caters to in-service and pre-service teachers, researchers, and postgraduate students but also serves anyone interested in mastering or honing their TELT skills. In a word, the book's well-organized and concise structure makes it an excellent reference for enhancing knowledge and skills in TELT. Thus, by effectively

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combining pedagogy and technology in language teaching, "Teacher Development in Technology-Enhanced Language Teaching" provides a comprehensive understanding of TELT, making it an indispensable resource for various individuals and groups interested in TELT development.

The book is divided into three sections, each of which provides a brief summary of the topics covered in the chapters. This serves as a helpful guide for readers who wish to selectively read specific chapters. Each chapter concludes with a summary, discussion questions, and a section dedicated to references and further reading. For readers seeking additional information on the subject, the final section of each chapter is a valuable resource. The book's well-organized and reasonable structural design is a significant advantage, allowing readers to easily navigate the book and access the information they need. Ultimately, the book's structure is a notable strength, making it a valuable resource for those interested in the subject matter.

Part 1 of this work is dedicated to addressing the concerns of language teachers in computer-assisted language learning (CALL) environments. It comprises four main chapters that delve into technology-enhanced language teaching (TELT). Chapter 1 provides an overview of the historical development of CALL and offers a comprehensive review of relevant literature. The chapter examines various aspects of CALL, including content, process, teacher training effectiveness, transfer of coursework to classroom practice, factors influencing technology integration, continuous professional development, and future directions. By exploring the historical evolution of CALL and reviewing the relevant literature, Chapter 1 provides a solid foundation for understanding the current state of TELT. The chapter highlights the importance of effective teacher training and the need to bridge the gap between theory and practice. It also underscores the significance of continuous professional development and the role of technology in shaping the future of language teaching. When it's all said and done, Chapter 1 serves as a valuable resource for language teachers seeking to enhance their understanding of CALL and TELT. It provides a comprehensive overview of the field and offers insights into best practices for integrating technology into language teaching.

Within Chapter 2, the author emphasizes the significance of various teacher roles in ensuring the successful implementation of computer-assisted language learning (CALL). These roles encompass being an observer, designer, implementer, evaluator, manager, and researcher. A comprehensive overview of the actions associated with each role is provided in Table 2.1, located on page 33. One of the strengths of this approach lies in the author's provision of resources that assist teachers in translating these roles into practice. These resources include sample web activities, evaluation forms for software and websites, and a list of considerations when assuming these roles. They serve as invaluable tools for both CALL newcomers and educators seeking to enhance their current practices. To sum up, this role-based approach highlights the multifaceted nature of teaching with technology, underscoring the significance of intentionality and strategic implementation. By embracing these diverse roles and utilizing the provided resources, teachers can augment their effectiveness and ultimately improve student learning outcomes.

In Chapter 3, the author provides a detailed description of the characteristics that distinguish novice and expert computer-assisted language learning (CALL) researchers. The chapter also outlines the competencies that language teachers should possess to effectively integrate technology into their teaching practices. Additionally, the appendices include digital literacy questionnaires that serve as valuable tools for self-reflection and assessment. This chapter is particularly useful for individuals with varying levels of expertise and roles in CALL teacher education. It encourages readers to reflect on their strengths and weaknesses and consider their place in the field of CALL. By providing a clear understanding of what it takes to be a successful CALL researcher, the chapter offers guidance to individuals seeking to improve their skills and knowledge in this area. To conclude, Chapter 3 serves as a valuable resource for anyone interested in CALL teacher education. It provides a comprehensive overview of the competencies required for effective technology integration and offers practical tools for self-assessment and improvement.

In Chapter 4, the author explores various approaches to language teacher development and introduces the ECCR (Exploration, Communication, Collaboration, and Reflection) model. The chapter emphasizes the importance of both formal and informal learning in the professional development of language teachers. The ECCR model provides a framework for language teachers to engage in meaningful and effective professional development. By encouraging exploration, communication, collaboration, and reflection, the model promotes a holistic approach to learning that can lead to significant improvements in teaching practices. The chapter also highlights the value of informal learning opportunities, such as online communities and social media, in supporting language teacher development. These informal channels can provide valuable resources and opportunities for collaboration and reflection. As a whole, Chapter 4 offers valuable insights into the approaches to language teacher development and emphasizes the importance of both formal and informal learning. The ECCR model provides a practical framework for language teachers to engage in meaningful professional development, while the discussion of informal learning opportunities highlights the importance of leveraging technology to support ongoing learning and growth.

Part 2 of this work is comprised of four chapters, each of which focuses on a specific approach to computer-assisted language learning (CALL) teacher learning. These approaches include the role-based approach, the language skill-based approach, the tool-based approach, and the activity-based approach. Each chapter provides a detailed exploration of the respective approach, highlighting its strengths and weaknesses and offering practical guidance for language teachers seeking to improve their CALL teaching practices. By examining these different approaches, the author provides a comprehensive overview of the various strategies and techniques that can be employed to enhance CALL teacher learning. Taking everything into account, Part 2 serves as a valuable resource for language teachers seeking to improve their CALL teaching practices. The four chapters offer a range of approaches and strategies that can be tailored to meet the unique needs and goals of individual teachers. Therefore, by providing practical guidance and insights into best practices, this section of the work offers a valuable contribution to the field of CALL teacher education.

Chapter 5 introduces the role-based approach to computer-assisted language learning (CALL) teacher education, which is based on the roles of CALL teachers discussed in Chapter 2. This chapter is divided into six sections, each corresponding to a specific role: observer, designer, implementer, evaluator, manager, and researcher. Each role involves a range of tasks that must be considered and performed to effectively integrate technology into language teaching practices. To illustrate the practical application of each role, the author provides an example learning task for each section. For the role of observers, the task involves observing a CALL classroom. For the role of designers, the task is to design a web activity. For the role of implementers, the task is to create a CALL lesson plan. For the role of evaluators, the task is to evaluate a language learning website. For the role of managers, the task is to organize CALL resources for a specific purpose. Finally, for the role of researchers, the task is to conduct action research to investigate CALL. By providing these practical examples, Chapter 5 offers valuable guidance for language teachers seeking to improve their CALL teaching practices. Besides, the role-based approach provides a comprehensive framework for understanding the various roles and responsibilities of CALL teachers, while the example learning tasks offer practical strategies for putting these roles into practice. Summing up, Chapter 5 serves as a valuable resource for language teachers seeking to enhance their CALL teaching practices. By providing practical guidance and insights into best practices, this chapter offers a valuable contribution to the field of CALL teacher education.

Chapter 6 focuses on the language skill-based approach to computer-assisted language learning (CALL) teacher education. This approach is centered around the four main language skills: reading, writing, listening, and speaking, as well as additional areas such as pronunciation, vocabulary, grammar, and culture. The chapter provides practical guidance on how to implement this approach through a series of tasks. These tasks include teaching reading with a word cloud, teaching writing with a wiki, and teaching culture with authentic videos. By providing these examples, the author offers valuable insights into how technology can be used to enhance language teaching across a range of skill areas. In essence, Chapter 6 serves as a valuable resource for language teachers seeking to improve their CALL teaching practices. By focusing on the language skill-based approach and providing practical examples of how to implement this approach, the chapter offers a comprehensive framework for understanding how technology can be used to enhance language teaching across a range of skill areas.

Chapter 7, entitled "Tool-Based Approach," is a comprehensive guide for language teachers on how to use a variety of online tools based on Son's (2010) Online Tools for Language Teaching (OTLT) framework. The OTLT framework consists of 12 categories of online tools, including learning/content management systems, communication tools, live and virtual worlds, social networking and bookmarking tools, blogs and wikis, presentation tools, resource sharing tools, website creation tools, web exercise creation tools, web share engines, dictionaries and concordancers, and utilities. The chapter is divided into 12 sections, each corresponding to one of the 12 categories in the OTLT framework. Each section provides practical guidance on how to use the online tools effectively, with a corresponding task that demonstrates the tool's application. These tasks include creating quizzes in a learning management system, interacting with learners in an online discussion forum, collaborating on a virtual whiteboard, engaging learners through a social networking service, writing a blog, creating a video slideshow using a presentation tool, sharing a file through a file hosting service, creating a website using a website builder, creating web exercises using an authoring tool, developing strategies for searching the internet, finding word meanings and associations in an online graphical dictionary, and building a cloud database for collaboration. By providing practical guidance on how to use a range of online tools, Chapter 7 offers valuable insights into how technology can be used to enhance language teaching practices. The chapter provides a comprehensive framework for understanding the various online tools available to language teachers and offers practical strategies for using these tools effectively. By and large, Chapter 7 serves as a valuable resource for language teachers seeking to improve their CALL teaching practices, offering practical guidance and insights into best practices in the field of CALL teacher education.

Chapter 8 focuses on the activity-based approach to computer-assisted language learning (CALL) teacher education. This approach is centered around a series of to-the-point tasks that encourage language teachers to practice collaboration, communication, concordancing, creation, exploration, games, mapping, presentation, reflection, simulation, storytelling, surveys, tests, and tutorials. The chapter provides practical guidance on how to implement this approach through a series of tasks that are designed to enhance language teaching practices. These tasks include collaborating on a group project, communicating with learners through a messaging app, using a concordancer to analyze language use, creating a digital story, exploring a virtual world, playing a language learning game, creating a mind map, giving a presentation using a presentation tool, reflecting on teaching practices through a blog, simulating a real-life situation, creating a language learning survey, designing a language test, and creating a tutorial for learners. By providing practical guidance on how to use a range of activities, Chapter 8 offers valuable insights into how technology can be used to enhance language teaching practices. The chapter provides a comprehensive framework for understanding the various activities available to language teachers and offers practical strategies for using these activities effectively. Generally speaking, Chapter 8 serves as a valuable resource for language teachers seeking to improve their CALL teaching practices. Overall, also, by providing practical guidance and insights into best practices, this chapter offers a valuable contribution to the field of CALL teacher education.

Part 3 of this work comprises three chapters that offer context-specific ideas and selected computer-assisted language learning (CALL)-related resources for language teachers. These chapters provide practical guidance on how to implement CALL teaching practices in specific contexts, such as teaching English as a foreign language, teaching in a blended learning environment, and teaching in a mobile learning environment. The chapters also offer a range of selected resources, including websites, apps, and software, that can be used to enhance language teaching practices in these contexts. In the grand scheme of things, Part 3 serves as a valuable resource for language teachers seeking to improve their CALL teaching practices in specific contexts.

Chapter 9 offers practical recommendations for teacher development activities through four example scenarios that cater to a wide readership, including university lecturers, teacher trainers, novice teachers, and experienced teachers. The chapter provides corresponding suggestions and activity methods for each group of teachers in different situations, allowing readers to easily find and read the parts that are relevant to their needs and improve their teaching practices accordingly. By offering practical recommendations for teacher development activities, Chapter 9 also provides valuable insights into how language teachers can enhance their professional development. The chapter's focus on different scenarios and corresponding suggestions ensures that readers can find relevant information and apply it to their specific teaching contexts. On the whole, Chapter 9 serves as a valuable resource for language teachers seeking to improve their teaching practices through professional development activities. The chapter's practical recommendations and focus on different scenarios offer a comprehensive framework for understanding how to enhance language teaching practices in various contexts.

Chapter 10 serves as the bibliography for this work, containing a total of 168 studies related to teacher-related issues and content. While some entries were published before 2009, the majority of the studies were published between 2009 and 2017 in major computer-assisted language learning (CALL)-oriented journals, including ReCALL, Computer Assisted Language Learning, and Language Learning & Technology. The bibliography includes a diverse range of studies, such as "Teachers' perceptions about the use of computers in EFL teaching and learning" by Aydin (2013), published in Computer Assisted Language Learning, and "Video-stimulated reflection as a professional development tool in interactive whiteboard research" by Schmid (2011), published in ReCALL. Additionally, the book "Online Language Teacher Education: TESOL Perspectives," edited by England (2012) and published by Routledge, is also included in the bibliography. By providing a comprehensive bibliography, Chapter 10 offers a valuable resource for language teachers seeking to explore the latest research and best practices in the field of CALL teacher education. The inclusion of studies from major CALL-oriented journals ensures that the bibliography is up-to-date and relevant to current teaching practices.

Chapter 11 provides a comprehensive list of computer-assisted language learning (CALL) resources, including professional organizations, academic journals, websites, mobile apps, example apps for learning English, Online Tools for Language Teaching (OTLT), and Online Activities for Language Learning (OALL). The chapter lists a substantial number of professional organizations and academic journals related to CALL, applied linguistics, and TESOL, along with their corresponding links. Additionally, the chapter includes the names of mobile apps and details of some software. Furthermore, Chapter 11 provides specific names of online tools and activities corresponding to Chapters 7 and 8 of the book, along with their corresponding links. The chapter presents a substantial amount of information in a graphical manner, making it easier for readers to navigate and access the resources. When all is said and done, Chapter 11 serves as a valuable resource for language teachers seeking to enhance their CALL teaching practices. The chapter's comprehensive list of resources and graphical presentation offer practical guidance and insights into best practices in the field of CALL teacher education.

At the end of the book, five appendices are presented to provide additional resources for language teachers. Appendix 1 provides a list of relevant tasks from Part II of the book. Appendices 2 and 3 review language learning websites and apps, respectively. Appendices 4 and 5 include digital literacy questionnaires for language teachers and learners, respectively. These appendices cater to the diverse requirements of various readers, providing practical guidance for improving the use of technology in language teaching and promoting the development of language teachers. While the language teaching approaches and tasks presented in the book may not be suitable for all classroom environments, they offer valuable insights into how technology can be used to enhance language teaching practices. Classroom practitioners can benefit from browsing through the tasks and considering how they can be adapted to their own teaching contexts. In brief, this book is a valuable resource for language teachers, researchers, and teacher educators seeking to enhance their understanding of technology-enhanced language teaching. It provides a comprehensive overview of the field and includes valuable information on approaches and methods related to CALL. Therefore, it is highly recommended for those involved in second-language learning.

The book is a valuable resource for integrating technology into language learning and teaching, offering practical guidance based on current research. It is beneficial for both ELT researchers and practitioners. Part 2 provides specific tasks to help language teachers develop practical skills for implementing technology-enhanced language teaching (TELT) effectively. Part 3 includes useful scenarios and resources, making it a valuable reference for TELT. However, the book has limited coverage of mobile-assisted language learning (MALL), which is becoming increasingly important in ELT. While MALL tools are briefly mentioned under the CALL framework, language teachers, the book's primary target readership, should be equipped with knowledge and skills to use MALL tools effectively. Including MALL-oriented tasks in Part 2 would strengthen the book's content. Overall, it can be said that the book is well-organized and offers rich content, making it a valuable resource for ELT practitioners and researchers. It provides practical guidance and insights into best practices in TELT and can be considered a must-have resource in the field of ELT.

DECLARATION OF COMPETITING INTEREST

None declared.

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The editors of ***Journal of Language and Education*** would like to express their gratitude to all the reviewers who helped us work on each issue.

You helped us take JLE from an idea 9 years ago to a full-fledged quality publication indexed in Scopus, Web of Science, DOAJ, EBSCO, etc.

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Our reviewers are an essential part of the JLE family, so we would like to take this opportunity to thank you and to express our sincere appreciation of your contribution!

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REVIEW PAPERS

BOOK REVIEWS

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