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JOURNAL OF LANGUAGE & EDUCATION

HIGHER SCHOOL OF ECONOMICS
NATIONAL RESEARCH UNIVERSITY

CONTENT

Evidence-Based Social Sciences and Practices: A Scoping Review

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ABSTRACT

Introduction: The evidence-based medicine (EBM) was introduced in the 1990s, paving the way for the new approaches to science methodology and research evidence that changed medicine-related practices. Following the EBM, social sciences ranging from education to public governance and policymaking entered a new stage of knowledge production and dissemination. Each evidence-based social science field produces its own evidence and evidence synthesis laying the foundation for efficient social practices. Pilot searches failed to bring complex and complete evidence-based methodology for social sciences.

Purpose: This scoping review aims to identify the scope of the evidence-based social sciences and practices as an emerging field.

Method: The review adhered to the PRISMA extension for scoping reviews, and the PPC framework. The eligibility criteria include problem (population), concept, context, language, time period, types of sources, geographical location, databases, areas of research. The searches to identify relevant publications entail searches in the Scopus database. The studies were identified and selected by screening titles, abstracts and full texts, totalling 35 documents.

Results: The results cover search and selection outcomes; a bibliometric analysis, the breakdown of the publications among the four thematic clusters; the findings relating to evidence-based medicine and practice methodology applicable to social sciences; the analysis of the research area of evidence-based social sciences and practices; the social science practices by sectors. Much of the EBM methodology was directly borrowed by social sciences. Though, the major controversy was found in the hierarchy and levels of evidence as social sciences are subject to human choices. Randomized controlled trials and systematic reviews were analysed in the context of social sciences. The most elaborated and fast developing evidence-based areas in social sciences contained evidence-based education and evidence-based policymaking, with systems of governmental agencies and institutions introducing these evidence-based practices.

Conclusion. The review attained the objective and gave answers to the research questions. Only few studies were published to comprehensively address the emerging field of evidence-based social sciences and practices. Fragmentated sub-fields are covered unevenly, with many mythological divergences and disputed issues, including the quality of evidence, their weight and hierarchy, types of research.

KEYWORDS

evidence-based social sciences, evidence-based practice, hierarchy of evidence, systematic review, evidence-based policymaking, evidence-based education, research synthesis, knowledge production

INTRODUCTION

The early 1990s brought scientific medicine into existence which was later embodied into the concept of evidence-based medicine (EBM) (Wyer & Silva, 2009). The new concept was attributed to "an increasing awareness of the weaknesses of standard clinical practices" (Sur & Dahm, 2011) that implied a decreasing quality of healthcare and lowering credibility of medicine as a research field. Evidence-based medicine provides for explanations of the quality

of evidence, levels of evidence, bias, and the credibility of experts' opinion (Wyer & Silva, 2011).

Efforts have been made to enhance the credibility of research evidence across various disciplines and sectors (Gleeson et al., 2023), ranging from better knowledge production and dissemination to systems of practical appliances of research evidence (Boaz & Nutley, 2019). An interest taken by the academe in evidence-based methodology was prompted by a general replication crisis resulting in plummeting credibility to theories and science at large (Brown et al., 2014). Failures to replicate research are rooted in poor quality and deficiencies in methodology; dubious evidence, mainly based on experts' opinion; academic misconduct, including falsification and fabrication of data; defective reporting of research results due to poor academic literacy; inadequate peer review and overlooked or missed biases in research results (Brown et al., 2014; Rouphael, 2022).

Evidence-based medicine has been developing since the 1990s to offer a new methodology and approach to evidence transferred and incorporated in other sciences (Schwarz & Tilling, 2023; Reiss, 2016; Weber et al., 2024; Mahmoudi et al., 2024; Klose, 2024). The first publications on specific issues of evidence-based social sciences and practices first appeared on the turn of the century (Ackers, 2000; Humphries, 2003).

The spread of evidence-based practices beyond medicine and healthcare began with the emergence of governmental agencies in the US, the UK, Australia, Sweden and other sparse countries in the 1990s and early 2000s where evidence-based methodology was incorporated in the processes of working out new social and economic policies (Ackers, 2000). The policy objectives were to increase efficacy and efficiency of political efforts, to support public management with the best practices proved by research evidence. But evidence-based practices are not ubiquitous (Boaz & Nutley, 2019). Quite a few countries (mainly Anglophone) and not many sectors (policymaking, management, education and a few more) stick to the evidence-based methodology (Klose, 2024).

Practices and hierarchy of evidence across disciplines and sectors are subject to great variance. All sectors and disciplines seem to be studied individually (Harris & Williams, 2019; den Heyer, 2022; Schwarz & Tilling, 2023). The pilot searches of the Scopus database, Semantic scholar, and Research Gate have found neither reviews of evidence-based sciences, nor research on the evidence-based methodology in social sciences across disciplines. So far there are no umbrella textbooks or monographs covering evidence-based social sciences. Even the term "evidence-based social sciences" has been used in few publications only occasionally (Zarghi & Khorasani, 2018).

Social sciences essentially borrow evidence-based methodology from evidence-based medicine with elaborating those components that could fail to fit in social science research. Evidence itself is construed in ways different from medicine as some studies show (Knezevic et al., 2024; Shan & Williamson, 2021). Thus, there is no comprehensive reinvention of evidence-based methodology in social sciences. Probably, it explains why instead evidence-based social sciences researchers more often study evidence-based practices as sets of methods and approaches applied within a field or sector.

This review aims to synthesize research on evidence-based social sciences and practices to identify the scope and cohesion of the emerging field. To attain the review objective, we are to answer the following research questions:

(1) What is the impact of EBM studies on research on evidence-based social sciences and practices?

(2) What is the scope of research field of evidence-based social sciences and practices?

(3) What are the key features specific of individual evidence-based social science practices by sectors?

METHOD

Protocol

Commencing the present scoping review, we meticulously developed a research protocol. The authors hereby certify that this review report constitutes a faithful, precise, and transparent depiction of the review conducted; no deviations from the protocol were registered; all significant issues were reported comprehensively; and any departures from the original study design have been duly elucidated. This scoping review adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews (Tricco et al., 2018) and the framework proposed by Arksey and O'Malley (2005).

Search Eligibility Criteria

The population/problem, concept, and context (PCC) framework was applied to establish an effective search strategy (Table 1), with a rationale for each criterion.

Search Strategies

This review systematically interrogated the Scopus database to identify relevant publications. The search was conducted using a combination of the keywords "evidence-based" AND "social sciences" on May 10, 2024.

The search in the refence lists was applied to the publications selected from the Scopus database after screening of

Table 1

Eligibility criteria

Criterion	Inclusion	Exclusion	Rationale
Population/Problem	N/A	N/A	As the review focuses essentially on the concept of evidence-based social sciences and practices. Neither population, nor problem is applicable
Concept	Evidence-based social sciences and practices	Other concepts	The aim of the review is to identify the scope and recent trends of evidence-based social sciences
Context	Social sciences and practices, notions of evidence-based medicine as applicable to social sciences	Other disciplines	Focus of the review is on evidence-based sciences and practices
Language	English	Other languages	The language choice is identified by its status as a lingua franca of international science
Time period	2000-till now	Before 2000	The pilot searches proved that the earliest documents appeared on the turn of the century
Types of sources	Full texts of articles, reviews, editorials, books, book chapters and other types of publications	Unavailable sources, unavaiable full texts	This review aims to get a comprehensive understanding of the field
Geographical location	Any location	None	Getting international perspective
Database	Scopus	Other than Scopus	The Scopus database was selected as one of the biggest of high-quality publications on social sciences
Areas of Research	Social Sciences	Other Research Areas	As the review focuses on social sciences, other fiends were not included. As the field "Medicine" offers documents on social practices marked also as "Social Sciences", they were essentially eliminated from the review as non-applicable, though a few were retrieved as they were of general nature applicable to the methodology of evidence-based social sciences

the titles, abstracts and full texts. The full-text publications eligible for the review were identified after screening.

Study Selection

Two reviewers identified studies applying the eligibility (inclusion and exclusion) criteria. After filtering the documents in the Scopus database (period; language; subject area), the reviewers individually screened the titles and abstracts of the identified documents. Both authors marked all publications with their decision "to include" or "to exclude". Then the individual decisions were discussed in case of disagreement. A consensus was reached on each disputable document regarding the eligibility criteria.

The authors searched for the full texts of the previously selected publications. The full texts were found either via open access or at request applied to the publications' authors through the Research Gate. Each of the full-text papers was thoroughly read and analysed by each reviewer to identify their relevance to the review.

The relevant publications found in the reference list of the selected studies were included subject to full text.

Data Extraction

Whist pilot-searching for the relevant publications, the authors individually singled out thematic clusters that potentially described the field of evidence-based social sciences and practices, then iteratively compared the clusters and identified them by mutual agreement (Table 2).

Based on the research questions and the hypothetical thematic clusters, the reviewers tailored a table for the data extraction that included two categories titled "evidence-based social sciences" and "evidence-based practices".

We conducted a preliminary test of this form using a subset of ten relevant studies to ensure accuracy. When the form had been approved, each author entered the raw data from all articles into the table. Then the data were compared. If different, they were eliminated or kept by mutual consent.

Data Analysis and Synthesis

We categorized the raw data essential for this review as "evidence-based social sciences" and "evidence-based prac-

Table 2

Thematic Clusters of the Review (Authors' Hypothesis)

	Thematic cluster	Shortened title
1	evidence-based social sciences	EBSS
2	evidence-based practices (across sectors and disciplines)	EBP
3	hierarchy of evidence	evidence
4	knowledge production	knowledge production

tices", compiling lists of potential features and elements. These categories included the following:

(1) Evidence-based social sciences: data relating to methodology of evidence-based social sciences, including the specific methods applied across various disciplines; evidence-based medicine postulates applicable to social sciences; hierarchy of evidence; knowledge synthesis and production;

(2) Evidence-based practices: data on the evidence-based production and synthesis of knowledge applied in social practices, in policymaking and other social sectors.

RESULTS

Search and Selection Results

A total of 565 records were initially found in the Scopus database. After applied filters (period; language; subject area) the total decreased to 166 studies that were eligible for title and abstract screening. After title and abstract screening, 88 articles were deemed irrelevant and excluded. Then 17 articles without full texts were excluded. After full articles screened, 26 articles were included in the final analysis. A thorough search in the reference lists of the 26 retrieved studies brought another 9 full-text papers. The PRISMA flow-chart (Figure 1) depicts the identification and screening procedure.

A Bibliometric Analysis

The ultimate 35 documents retrieved for the review is unevenly distributed from 2007 to 2024, with a high of 9 this year (incomplete data). The documents for 2009, 2011, and 2015 are not available (Figure 2). Five journals published two articles each, including *BMC Medical Education, Journal of Clinical Epidemiology, Journal of Development Effectiveness, Research on Social Work Practice*, and *Social Science and Medicine*. The other 25 journals brought out one publication each. Nine out of the 30 journals belong to medicine-related fields.

The most prolific authors include Hamel, C. (2 publications); Moher, D. (2 publications); Shea, B.J. (2 publications); Tugwell, P. (2 publications); and White, H. (2 publications). The

other 92 researchers authored one publication each. The average number of authors per publication is 2.77.

The geographic breakdown of the publications (see Fig.3) entails the USA with nine publications; Australia (4 documents); the UK (4 publications); Belgium (3 documents); India (3 articles). Another six countries accounted for two publications each (Canada, China, Denmark, Netherlands, Spain, and Sweden). The other seven countries had one documents each.

According to the inclusion criteria, the documents under review included all types of publications. The review contains 26 articles (74.3 per cent), 5 reviews (14.3 per cent), 3 notes (8.6 per cent), and 1 editorial (2.9 per cent). All documents were in the Social Sciences domain. But as many of them entered more than one subject area, 8 documents also belonged to Arts & Humanities, 8 documents to Medicine, 6 publications to Psychology, 3 documents to Business, Management and Accounting, 2 publications to Economics, Econometrics and Finance, Environmental Science, Decision Sciences, and Computer Science accounted for one document each.

The most cited publications in the review entail two articles on assessment of multiple systematic reviews tools - AMSTAR and AMSTAR-2 (Shea et al., 2007; Shea et al., 2017) with 4751 and 3245 citations respectively as of May 10, 2024. Then followed an article on randomized controlled trials (Deaton & Cartwright, 2018) cited 858 times and an article on the evidence pyramid (Murad et al., 2016) cited 731 times.

Thematic Clusters

Both authors were to classify the retrieved publications, using the hypothetical thematic clusters. The results were compared. The discrepancies were few. Upon distribution of the studies, the hypothetical thematic clusters were confirmed as adequate and complete. The reviewers classified the papers by clusters, providing particulars in the brackets (Table 3).

Thus, the thematic cluster "evidence-based social sciences" included six publications. Most of the documents (22) in the review were classified as "evidence-based practice". Fourteen publications dealt with hierarchy of evidence. And only

Figure 1

Selection of Publications for the Review
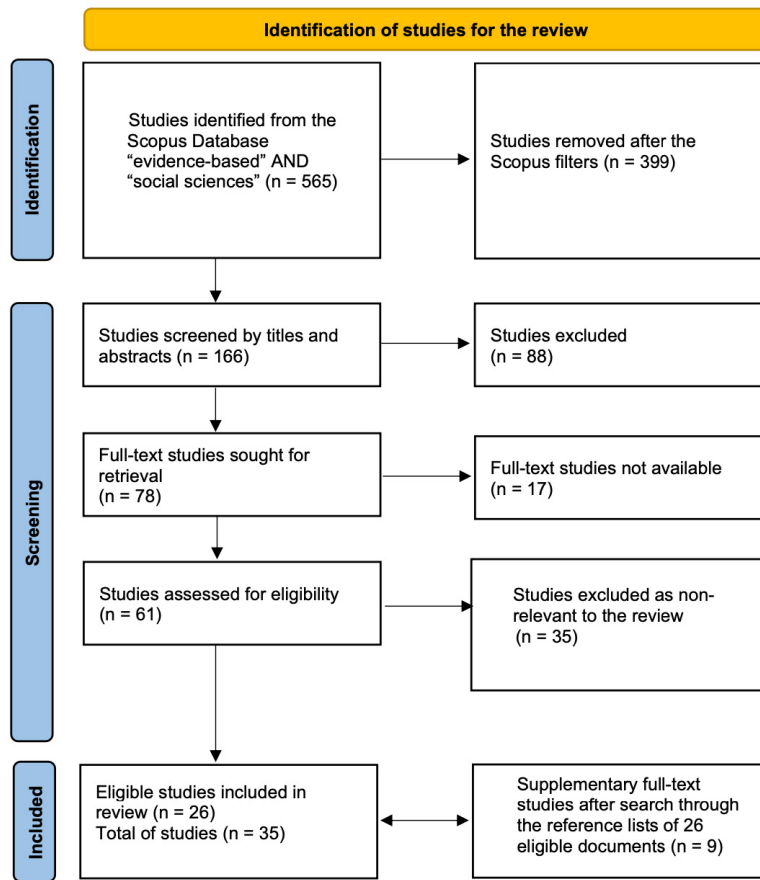
Figure 2

Scopus-Indexed Documents on Evidence-Based Social Sciences and Practices by Year (2007-2024)
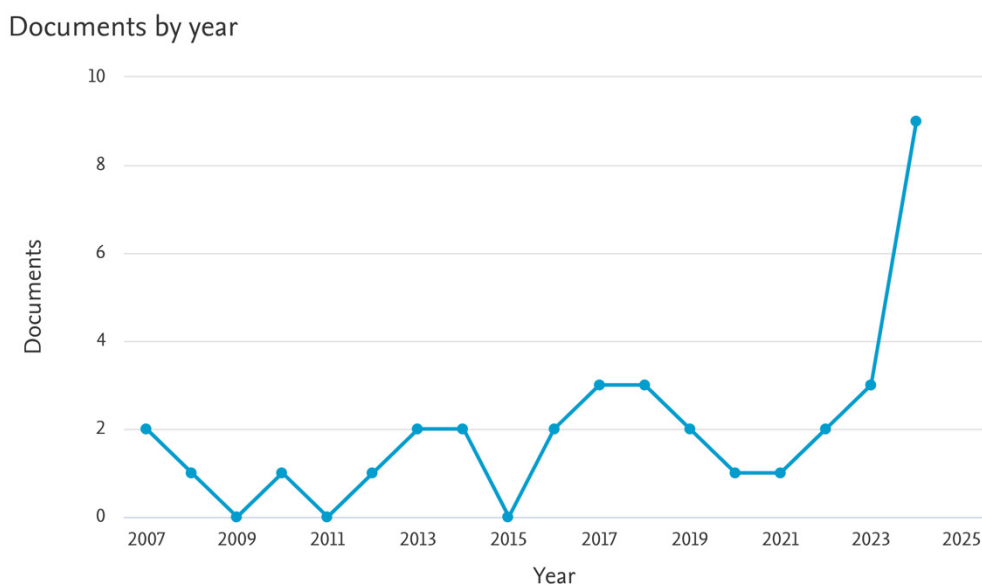
Note. Scopus Database as of April 27, 2024.

Figure 3

Scopus-Indexed Documents on Evidence-Based Social Sciences and Practices by Country and Territory

Documents by country or territory

Compare the document counts for up to 15 countries/territories.

Country	Documents
United States	9
Australia	4
United Kingdom	4
Belgium	3
India	3
Canada	2
China	2
Denmark	2
Netherlands	2
Spain	2
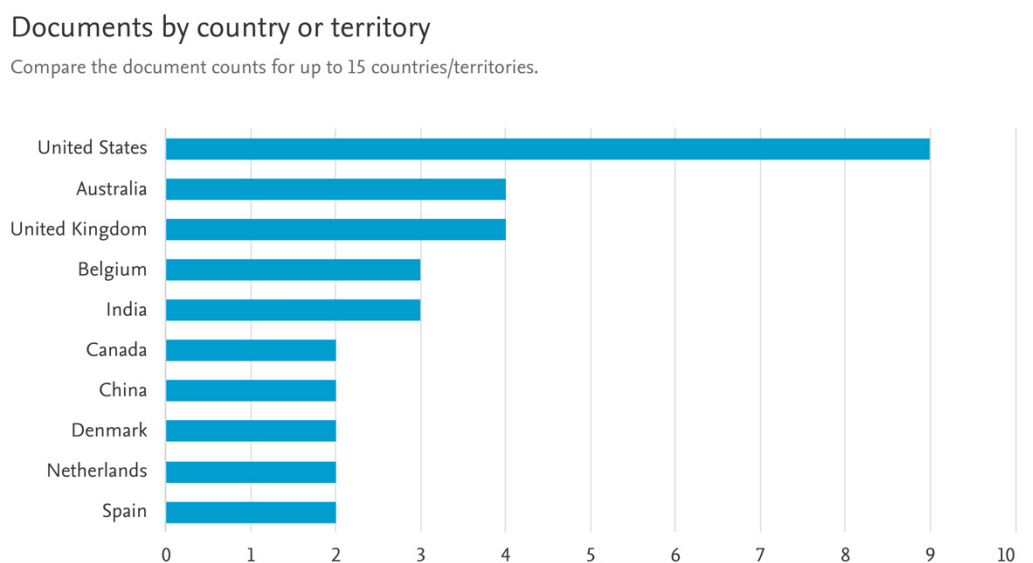
Note. Scopus Database as of April 27, 2024.

	Publications under review	Thematic cluster
1	Bai et al., 2022	evidence (systematic reviews)
2	Boruch & Rui, 2008	EBP evidence
3	Brown et al., 2014	knowledge production evidence
4	Burkhauser & Burkhauser, 2024	EBP (policymaking)
5	Concato, 2013	Evidence EBM
6	De Vincenzo et al., 2024	EBP (across disciplines) EBSS
7	Deaton & Cartwright, 2018	evidence (randomized controlled trials)
8	Drèze, 2018	evidence (randomized controlled trials)
9	Gil-Olivares et al., 2024	EBM (postulates)
10	Goerder et al., 2023	EBP (policymaking)
11	Gray et al., 2013	EBP
12	Haddaway et al., 2016	knowledge production (systematic reviews)
13	Hannes & Claes, 2007	EBP
14	Howlett et al., 2024	EBP (library and information practice)
15	Klose, 2024	EBSS EBP (policing)
16	Krause & Licona, 2020	EBP (policy)
17	Larsen et al., 2019	EBM EBP
18	Luján, 2023	EBP (policy) EBM
19	Mallett et al., 2012	evidence (systematic reviews)
20	Murad et al., 2016	evidence

	Publications under review	Thematic cluster
21	Murdach, 2010	EBP evidence (soft data)
22	Nielsen et al., 2024	EBP (education)
23	Nilendu, 2024	EBP (evidence-based education) EBSS
24	Perez-Gonzalez, 2024	Evidence EBP
25	Schwarz & Tilling, 2009	EBP
26	Shan & Williamson, 2021	EBP+ (policy) evidence
27	Shea et al., 2007	evidence (AMSTAR)
28	Shea et al., 2017	evidence (AMSTAR2)
29	Sheble, 2017	EBP (policy) knowledge production EBSS
30	Tellings, 2017	evidence EBP
31	Watts, 2014	EBP (policy)
32	Weber et al., 2024	EBSS EBP (evidence-based management)
33	White, 2019	EBP (management)
34	White, 2022	EBSS EBP
35	Zapp, 2018	knowledge production

Figure 4

VOSviewer Visualisation of the Review Thematic Clusters
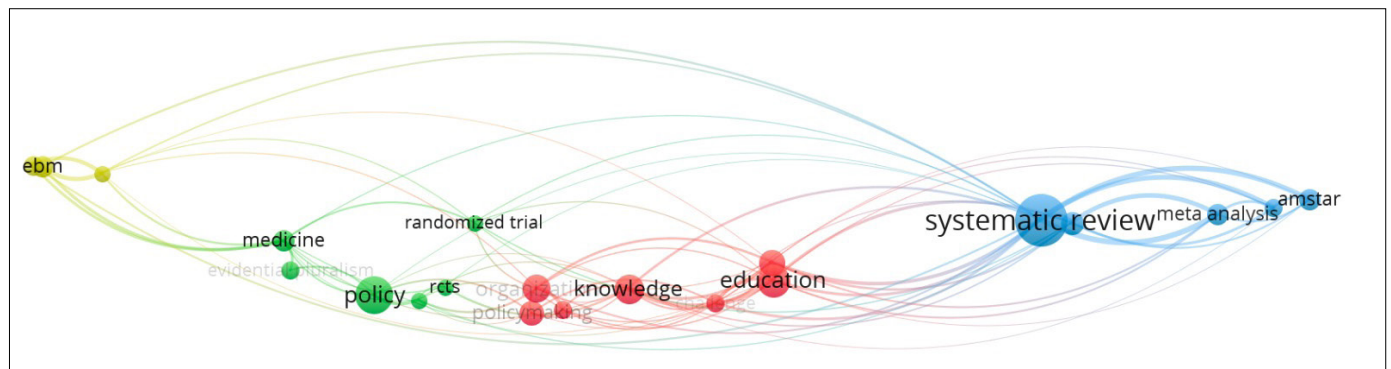
four documents were focused on knowledge production. There were some overlapping as fifteen out of 35 articles were attributed to two or three thematic clusters.

The VOSviewer software's analysis of the metadata from the 35 selected publications mapped out a structured landscape of thematic clusters, each color-coded to denote distinct realms of focus in the field of the review (see Fig.4). The density of terms started from 4. The blue cluster covers synthesis of research: systematic reviews, meta-analyses, AMSTAR (a tool for systematic reviews), methodological quality. The red cluster encompasses the educational and knowledge-production contexts. The green cluster represents issues spread across disciplines from evidence-based medicine. The yellow cluster is also linked to EBM.

Given the difference of the initial inputs, the hypothetical clusters differ from the software clusters. The VOSviewer

analysed only the meta-data of the publications (titles, abstract, authors' keywords), whereas the reviewers considered full-text publications while singling out the thematic clusters. One more aspect that caused a divergency was the overlapping of some publications among the clusters.

Evidence-Based Medicine and Practice Methodology Applicable to Social Sciences

Evidence-based medicine is a fully-fledged field of research (Leach & Veziari, 2022). The methodology and principles of EBM are directly borrowed by other disciplines with some reservations and adaptation. Before proceeding to the specific features of evidence-based social sciences and practices, we consider the review results relating to the concepts, mechanisms and other basics of EBM applicable to social sciences and practices (Table 4).

Evidence-based medicine is a patient-centred decision-making process (Klose, 2024). Evidence-based practice is based on the best research evidence with clinical expertise and patients' values (Sackett et al., 2000; Gray et al., 2013). The EBM major postulates include the relationship of systematic reviews with primary research and their values for decision making; links between the problem and the research type; a comparative low weight of expert opinion in the pyramid of evidence; synthesis of the best evidence lays the foundation of decision making in the context of multiple criteria (Gil-Olivares et al., 2024).

EBM provides for a rigid hierarchy of evidence (Concato, 2013). Recently, it has been the core of heated discissions, with variations of evidence pyramids at the core (Murad et al., 2016; Concato, 2013). Pyramid versions are based on either internal validity (or risk of bias) or external validity (or applicability) (Murad et al., 2016). At present, EBM+ puts forward an epistemological thesis that combines evidence of correlations and evidence of mechanisms complementing each other (Perez-Gonzalez, 2024). Randomized controlled trials (RCT) are supposed to be "the paragon of rigour" and hard evidence among other forms of evidence (Drèze, 2018). RCT is evaluated as an "ideal methodology for casual interference" (Deaton & Cartwright, 2018).

Systematic reviews and meta-analyses play an essential role in EBM, being at the top of evidence pyramids. Several publications in the review dwell upon systematic reviews (Murad et al., 2016; De Vincenzo et al., 2024) in EBM, their placement in evidence pyramids and assessment tools for systematic reviews – AMSTAR and AMSTAR 2 (Shea et al., 2007; Shea et al., 2017). The latter are employed to assess systematic reviews.

Research Area of Evidence-Based Social Sciences and Practices

The publications on evidence-based social sciences and practices are diverse and focus on various aspects of the knowledge production and synthesis (Luján, 2023; Sheble, 2017), evidence-based methodology in social sciences (Tellings, 2017; Mallett et al., 2012; Hannes & Claes, 2007; Haddaway et al., 2016), evidence revolution (White, 2019), discipline-related issues of evidence-based practices (Table 5). The results of the review on evidence-based social sciences and practices are presented in Appendix 2.

The transfer from academic, disciplinary and mainly university-based science that is defined as Mode 1 Science to applied and diverse production of knowledge called Mode 2 Science result in merging networks of science stakeholders, including all-level governments, think tanks, activist groups and universities (Zapp, 2018). In the new environment, new types of science emerge in addition to tradition academic science. As opposed to academic science discourse is concentrated around evidence-based science and regulatory science.

Evidence stands out in the reviewed studies on evidence-based social sciences and practices as the core of the methodology. White (2019) highlights the waves of evidence revolution witnessed for over 30 years in public management in the United States and the United Kingdom. The latest period is marked with institutionalization of the use of evidence through newly established "knowledge brokering agencies" (White, 2019). Evidence-based practices in public management and policymaking is gaining popularity across many countries, though the reviewed papers outline its exceptional spread in "the Anglosphere" (Klose, 2024) and Scandinavian countries (Schwarz & Tilling, 2009).

The recent publications put forward evidential pluralism in basic social science research (Shan & Williamson, 2021). Though, there are many disputable issues regarding evidence and its hierarchy in social sciences. Evidence is separated from the notions of "truth", "knowledge", and "proof" (Biesta, 2010; Oancea & Pring, 2009). Telling (2017) maintains that "evidence" may be expressed as observable data but "in philosophical reasoning" arguments serve as evidence. In legal research, previous judgements are treated as evidence (Tellings, 2017).

Evidence is hard data in EMB. It is measurable and quantifiable (Graziano & Raulin, 1997). In most social science research, soft data of various categories are of great importance in decision making, including accounts, explanations, interpretations, arguments, non-verbal communication (Murdach, 2010).

In an attempt to build evidence-grading schemes in social sciences, since the 1990s many institutions have been set up to address efforts to generate sound evidence. They entail Cochrane Collaboration (health); Campbell Collaboration (education, crime, welfare); Society for Prevention Research

Table 4

Evidence-Based Medicine and Practice Methodology Applicable to Social Sciences and Practices Extracted from the Reviewed Documents

	Key Ideas & Concepts	Evidence-based medicine and practice basics (raw data)	Extracted from
1	Evidence-based medicine	Evidence-based medicine, thus, became early on associated with a process of clinical decision-making which emphasizes the need to combine research evidence and practical expertise. A few years later, this definition was further amended to position evidence-based medicine more clearly as a patient-centred decision-making process...	Klose, 2024
2	Major postulates of evidence-based medicine	4 new postulates for better use of scientific evidence in medical decision-making: (1) Systematic review synthesizes available scientific evidence methodologically but is no better than primary studies. (2) Each problem in the field of health care corresponds to a suitable type of research to generate a solution. (3) Expert opinion is not a type of scientific evidence but could be transferred to the scientific evidence through its methodological systematization. (4) The decision-making proposed by the Evidence-Based Medicine follows 2 moments: first, the synthesis of the best-available scientific evidence and, second, the formulation of decisions through the consideration of multiple criteria.	Gil-Olivares et al., 2024
3	Evidence in EBM	A rigid hierarchy of these design types is a fairly recent phenomenon, promoted as a tenet of "evidence-based medicine," with randomized controlled trials receiving gold-standard status in terms of producing valid results. Although randomized trials have many strengths, and contribute substantially to the evidence base in clinical care, making presumptions about the quality of a study based solely on category of research design is unscientific. Both the limitations of randomized trials as well as the strengths of observational studies tend to be overlooked when a priori assumptions are made...	Concato, 2013
4	Evidence in EBM	The spectrum of medical research includes studies in patient-oriented (non-laboratory) research that focus on an intact person or patient as the unit of observation. Patient-oriented research relies on the basic science of clinical epidemiology, and individual studies are often described using terms such as outcomes research or health services research. One of the assertions of EBM—in part due to problems arising from historical, controlled trials —is the inherent inferiority of observational studies compared with RCTs, because of confounding (susceptibility bias). Although this dogma is now firmly established, various questions have been raised regarding its legitimacy...	Concato, 2013
5	Types of evidence	...the 'commonly shared guidelines' put evidences in the following order of relevance: systematic reviews of well-designed studies (including meta-analyses), group research designs that have a high degree of internal validity, group research designs that have shortcomings in addressing threats to internal validity, case studies, and only on the lower levels of the hierarchies, experts' opinion (Hunsley, 2007).	De Vincenzo et al., 2024
6	A pyramid of evidence	A pyramid has expressed the idea of hierarchy of medical evidence for so long, that not all evidence is the same. Systematic reviews and meta-analyses have been placed at the top of this pyramid for several good reasons. However, there are several counterarguments to this placement. Not all evidence is the same.	Murad et al., 2016
7	Evidence of correlations and evidence of mechanisms	The theoretical core of EBM+ is the Russo-Williamson thesis (Russo & Williamson, 2007). According to this epistemological thesis, both evidence of correlations and evidence of mechanisms are normally needed to establish a causal claim in medicine. It is argued that evidence of correlations and evidence of mechanisms complement each other. Evidence of correlations addresses the major weaknesses of evidence of mechanisms, and vice versa...	Perez-Gonzalez, 2024
8	Randomized controlled trials	In evidence-based practice, randomized controlled trials (RCTs) are presented as a crucial method for establishing causal relationships and assessing the efficacy of policy interventions.	Perez-Gonzalez, 2024
9	Evidence-based practice	Evidence-based practice (EBP) enhances the quality of healthcare, reduces the cost, improves patient outcomes, empowers clinicians, and is recognized as a problem-solving approach (Mazurek Melnik & Fineout-Overholt, 2019)	Nielsen et al., 2024

	Key Ideas & Concepts	Evidence-based medicine and practice basics (raw data)	Extracted from
10	Various versions of the evidence pyramid	The placement of systematic reviews at the top had undergone several alterations in interpretations but was still thought of as an item in a hierarchy. Most versions of the pyramid clearly represented a hierarchy of internal validity (risk of bias). Some versions incorporated external validity (applicability) in the pyramid by either placing N-1 trials above RCTs (because their results are most applicable to individual patients) or by separating internal and external validity. Another version (the 6S pyramid) was also developed to describe the sources of evidence that can be used by evidence-based medicine (EBM) practitioners for answering foreground questions, showing a hierarchy ranging from studies, synopses, synthesis, synopses of synthesis, summaries and systems. This hierarchy may imply some sort of increasing validity and applicability although its main purpose is to emphasise that the lower sources of evidence in the hierarchy are least preferred in practice because they require more expertise and time to identify, appraise and apply. Other barriers challenged the placement of systematic reviews and meta-analyses at the top of the pyramid. For instance, heterogeneity (clinical, methodological or statistical) is an inherent limitation of meta-analyses that can be minimised or explained but never eliminated (Berlin, 2014). The methodological intricacies and dilemmas of systematic reviews could potentially result in uncertainty and error (Dechartres et al., 2014).	Murad et al., 2016
11	Randomized controlled trials	Once upon a time, "evidence" was widely confused with randomized controlled trials (RCTs). The latter were held to be the paragon of rigour, and other forms of evidence, though not necessarily dismissed, were certainly devalued. Whenever observation, experience, reasoning or even statistical analysis suggested one thing and some RCT another, there was a tendency to assume that the RCT got it right. If not with evidence tout court, RCTs became synonymous with "rigorous evidence" or "hard evidence". The privileged status of RCTs was expressed in statements such as "all too often development policy is based on fads, and randomized evaluations could allow it to be based on evidence" (Duflo & Kremer, 2005, 206).	Drèze, 2018
12	Randomized controlled trials	Randomized controlled trials (RCTs) are widely encouraged as the ideal methodology for causal inference. This has long been true in medicine. It is also increasingly true in other health sciences and across the social sciences, including psychology, economics, education, political science, and sociology... The literature on RCTs in these areas are overlapping but often quite different; each uses its own language and different understandings and misunderstandings characterize different fields and different kinds of projects...	Deaton & Cartwright, 2018
13	Evidence-based practice	Evidence-Based Practice (EBP) is based on the notion of a linear model of knowledge production and transfer whereby research findings (knowledge in the knowledge transfer literature) produced in one location is transferred to the context of use through various mechanisms, such as the development of intervention guidelines or treatment protocols. Hence there are various steps in this linear process from knowledge development, generation, or production to knowledge translation, transfer, diffusion, dissemination, and utilisation or implementation in practice (Graham et al., 2006)... Central to EBP, however, is the need for critical appraisal of the nature and strength of research evidence, as well as the impact of contextual features in the practice setting.	Gray et al., 2013
14	Defining evidence-based practice (EBP)	Sackett et al.'s (2000) definition of EBP as a process of clinical decision-making entails 'the integration of best research evidence with clinical expertise and patient values' (p. 1) involving five steps: Convert one's need for information into an answerable question. Locate the best clinical evidence to answer that question. Critically appraise that evidence in terms of its validity, clinical significance, and usefulness. Integrate this critical appraisal of research evidence with one's clinical expertise and the patient's values and circumstances. Evaluate one's effectiveness and efficiency in undertaking the four previous steps, and strive for self-improvement.	Gray et al., 2013
15	AMSTAR 2 (A MeaSurement Tool to Assess systematic Reviews)	The revised instrument (AMSTAR 2) retains 10 of the original domains, has 16 items in total (compared with 11 in the original), has simpler response categories than the original AMSTAR, includes a more comprehensive user guide, and has an overall rating based on weaknesses in critical domains...	Shea et al., 2017

	Key Ideas & Concepts	Evidence-based medicine and practice basics (raw data)	Extracted from
16	Architecture of evidence-based practice	According to the Sicily statement group, teaching and practicing EBP requires a 5-step approach: 1) pose an answerable clinical question (Ask), 2) search and retrieve relevant evidence (Search), 3) critically appraise the evidence for validity and clinical importance (Appraise), 4) applicate the results in practice by integrating the evidence with clinical expertise, patient preferences and values to make a clinical decision (Integrate), and 5) evaluate the change or outcome (Evaluate /Assess) (Dawes et al., 2005; Larsen et al., 2019).	Nielsen et al., 2024
17	Improvement in students' EBP knowledge via interventions	...multifaceted interventions with a combination of lectures, computer lab sessions, small group discussion, journal clubs, use of current clinical issues, portfolios and assignments lead to improvement in students' EBP knowledge, skills, attitudes, and behaviors compared to single interventions or no interventions (Young et al., 2014; Bala et al, 2021).	Nielsen et al., 2024
18	AMSTAR (A MeaSurement Tool to Assess systematic Reviews)	A 37-item assessment tool [for systematic reviews] was formed by combining 1) the enhanced Overview Quality Assessment Questionnaire (OQAQ), 2) a checklist created, and 3) three additional items recently judged to be of methodological importance.	Shea et al., 2007

Committee on Standards; What Works Clearinghouse (WWC) of the US Department of Education; National Registry of Evidence Based Programs and Practices (substance abuse); Blueprints for Violence Prevention (juvenile justice and delinquency); Coalition for Evidence Based Policy; California Evidence-Based Clearinghouse for Child Welfare; and Best Evidence Encyclopedia (education) (Boruch & Rui, 2008).

In EBM, randomized controlled trials have the highest standard in terms of valid results (Concato, 2013). But it is not the case in social sciences where the focus of the research is on methods and assumptions required to apply specific methodology (Brown et al., 2014). In contrast with biological properties in EBM research, social sciences are subject to human choices. Though, social sciences occasionally include research relating to participants (population) and may incorporate RCT, they are far from clinical decision-making. Whereas EBM widely discusses evidence pyramids, offering their variations (Murad et al., 2016), in social sciences a constant trend towards generating evidence-grading schemes prevails as shown above (Boruch & Rui, 2008) that include specific evidence (i.e. evidence from quasi-experiments).

Like EBM, evidence-based social sciences and practices give credit and pay much attention to systematic reviews as "a vital means" of knowledge synthesis. Reviews of evidence also include systematic maps (Haddaway et al., 2016). The latter reliably catalogue evidence on specific topics. Both systematic reviews and systematic maps collate and analyse the available publications containing research evidence related to an issue, an objective, or a subject. Evidence-based practices advocate the use of research synthesis (systematic reviews and meta-analysis) to lower potential bias and distortions in the knowledge production (Hannes & Claes, 2007). Though, systematic reviews may exacerbate information overload (Riaz et al., 2016). They occasionally suggest that the quality of research under review is uneven (Tian et al., 2017).

Few studies discuss weaknesses and challenges that systematic reviews face (Mallett et al., 2012). Evidence-based practices proved that systematic reviews may suffer from inadequate or incomplete analysis, subjective screening and other drawbacks (Shea et al., 2017). But some criticism sounds contradictory. A limited access to databases in southern research organisations, inevitable subjectivity in the screening process, and low quality of research to be included in systematic reviews and meta-analysis are issues of doubt (Mallett et al., 2012). To conclude, research syntheses are greatly varied across social sciences as compared with clinical medicine (Sheble, 2017).

Social Science Practices by Sectors

The studies under review were also analysed by sectors to find the discrepancies and shared approaches to evidence-based practices. The results include the following practices: evidence-based education, evidence-based management, evidence-based policymaking, evidence-based library and information practice, evidence-based policing, and evidence-based economics (Table 5).

Education became of the first sectors where evidence-based practices were more or less widely introduced and accepted. The best practices are used to inform teaching and learning (Betts et al., 2019). Some authors report that an evidence-based education system promotes evidence evaluation (Nilendu, 2024). Evidence-based education (EBE) stick to a set of principles, including integration of research evidence into education (Shumba, 2015); the emphasis on critical thinking and problem-solving skills enabling students to analyze and assess evidence systematically (Prince, 2004). Spencer et al. (2012, p. 129) evolved the definition of evidence-based medicine as a decision-making process into the definition of evidence-based education where this process combines "the best available evidence, professional judgement, and clients' values..." (Spencer et al., 2019; Klose, 2024).

As for evidence in EBE and other social science practices, Veerman & Van Yperen (2007) singled out four levels, including "descriptive, theoretical, indicative, and causal". They found that each level of evidence lead to "potential, plausible, functional, and factual effectiveness of interventions respectively" (Veerman & Van Yperen, 2007).

Using the best available evidence from multiple sources, evidence-based management extract it by asking, acquiring, appraising, aggregating, applying, and assessing (Barends & Rousseau, 2018; Weber et al., 2024). Howlett et al. (2024) synthesize the evidence-based library and information practice process in the same vein, specifying "articulating questions, collecting, interpreting, and applying valid, reliable, and relevant evidence to support decision-making".

Evidence-based policymaking is one of the most spacious sectors of evidence-based practices: it has at least one academic journal (Evidence and Policy), a number of think-tanks across several countries (Watts, 2014) and within governmental agencies in Chile, South Africa, the UK, Mexico (Krause & Licona, 2020), the EU (Perez-Gonzalez, 2024), and many OECD countries (Zapp, 2018). Policy sectors are informed by scientific advice (Zapp, 2018) "to avoid biases, flawed reasoning …" (Perez-Gonzalez, 2014). Burkhauser & Burkhauser (2024) outlined the steps (stages) that describe evidence-based policymaking in the US: creating and disseminating the data required for policy researchers to produce evidence; dissemination of evidence in the academic journals and academia; the US policy research institutes

contributing to the academic policy literature by researchers from outside-the-Beltway policy research institutes affiliated with universities but also adding to policy debates inside the Beltway[1]; mature members of the Council of Economic Advisers giving advice to the US President (Burkhauser & Burkhauser, 2024).

Some studies under review contain criticism of evidence-based policymaking. Political risks linked to "allowing outside experts to scrutinize organizational practices" (Goerder et al., 2023) are connected with a potential discovery of sub-par performance (Carpenter 2014; Levine, 2020; Moffitt, 2010). Watts (2014) points to a prevailing opinion that policymaking needs evidence explaining conceptual muddle and doubts the proposition that policymaking should be evidence-based.

Evidence-based policing and evidence-based economics are approached in few studies included in the review. Evidence-based policing as "a new paradigm" aimed at better police performance and public safety (Sherman, 1998; Klose, 2024). It has gained popularity especially in the Anglophone countries[2]. Issues connected with evidence are treated in policing in the same mode other social science practices follow (Klose, 2024). Brown et al. (2014), the only economics-related research in the review, focus on replication research in evidence-based economics that help validate policy-related findings. The issue is of great importance especially for low- and middle-income countries, according to the authors.

Table 5

Evidence-Based Social Science Practices by Sectors in the Reviewed Documents

	Evidence-based social sciences practices (raw data) by sectors Evidence-Based Education	Extracted from
1	Evidence-based education emphasizes the use of empirical evidence, research findings, and best practices to inform teaching and learning processes (Betts et al., 2019).	Nilendu, 2024
2	An evidence-based education system (EBES) promotes critical thinking skills, evidence evaluation, and the application of scientific principles in forensic analysis (Meilia et al., 2018).	Nilendu, 2024
3	One key principle [of evidence-based education] is the integration of research evidence into educational practices (Shumba 2015). This involves using empirical evidence, scholarly research, and best practices to inform instructional strategies, curriculum development, and assessment methods in forensic education (Cook et al. 2008).	Nilendu, 2024
4	Another principle [of evidence-based education] is the emphasis on critical thinking and problem-solving skills, which encourages students to analyze and evaluate evidence systematically and logically (Prince, 2004).	Nilendu, 2024
5	Evidence-based education also promotes learner-centered approaches, where students actively engage in their learning process through hands-on activities, collaborative projects, and case-based learning (Hmelo-Silver, 2004).	Nilendu, 2024

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[1]   The Beltway is a colloquialism that embodies policymakers and politicians in Washington, D.C. portrayed as interested only in what happens within the confines of the highway circling the city.

[2]   For instance, the *What Works Center for Crime Reduction* in the UK and the *Center for Evidence-Based Crime Policy* at George Mason University in the USA.

	Evidence-based social sciences practices (raw data) by sectors **Evidence-Based Education**	Extracted from
6	Additionally, evidence-based education encourages the use of technology-enhanced learning tools, such as virtual simulations and interactive multimedia resources, to enhance student engagement and facilitate active learning (Mayer, 1997).	Nilendu, 2024
7	Evidence-based principles can be applied in forensic education by incorporating real-world case studies, mock crime scenes, and practical laboratory exercises (Egger, 2019).	Nilendu, 2024
8	Drawing directly on evolving definitions of evidence-based medicine, Spencer et al. (2012, p. 129), for instance, defined evidence-based practice in education 'as a decision-making process that integrates (1) the best available evidence, (2) professional judgment, and (3) client values and context'...	Klose, 2024
9	The implementation of evidence-based education may face challenges, including resistance to change, lack of faculty training and support, and limited resources (Chisum, 2019)...	Nilendu, 2024
10	Recognizing that students have diverse learning styles, it is crucial to tailor evidence-based practices to cater to visual, auditory, and kinaesthetic learners...	Nilendu, 2024
11	... explaining that RCTs are not always possible in educational practice for financial, methodological, or practical reasons and that the number of RCT-evaluated and proven effective interventions is still very low (Veerman & Van Yperen, 2007). Moreover, positive results are often flattered and studies often take place in controlled environments that do not resemble actual practice.	Tellings, 2017
12	... four levels of evidence (Veerman & Van Yperen, 2007): descriptive, theoretical, indicative, and causal, which lead to potential, plausible, functional, and factual effectiveness of interventions, respectively. Each level has its accompanying parameters of evidence and types of research. RCTs are at the highest, causal level and, for instance, observational studies are at the lowest, descriptive level. Studies should take interventions in actual practice as a starting point and decide based on these which research design is feasible.	Tellings, 2017
13	Evidence-Based Management	
14	It is based on the idea that good-quality management decisions require both critical thinking and use of the best available evidence. Evidence-based management is about making decisions through the conscientious, explicit and judicious use of the best available evidence from multiple sources by: 1. Asking: translating a practical issue or problem into an answerable question. 2. Acquiring: systematically searching for and retrieving the evidence. 3. Appraising: critically judging the trustworthiness and relevance of the evidence. 4. Aggregating: weighing and pulling together the evidence. 5. Applying: incorporating the evidence into the decision-making process. 6. Assessing: evaluating the outcome of the decision taken to increase the likelihood of a favorable outcome (Barends & Rousseau, 2018).	Weber et al., 2024
15	Evidence-Based Policymaking	
16	The central idea of this movement is that policy-making should be guided by the best available evidence... EBP is inspired by the evidence-based medicine (EBM) approach. In fact, EBP was initially introduced as the direct application of the EBM methods to policy-making.	Perez-Gonzalez, 2024
17	It has been applied to diverse areas such as development economics, crime prevention, education, housing policy, and criminal justice. Furthermore, EBP has achieved considerable relevance and influence in the US, the EU, and the UK.	Perez-Gonzalez, 2024
18	In 2013, for example, the British government established the What Works Network. This network aims to expand and consolidate the evidence-based approach in diverse areas of social policy. It integrates several centres such as The What Works Centre for Local Economic Growth, The Education Endowment Foundation, and The What Works Centre for Wellbeing.	Perez-Gonzalez, 2024
19	EBP aims to avoid biases, flawed reasoning, and misplaced goodwill in decision-making, which have been responsible for many undesired outcomes in the past.	Perez-Gonzalez, 2024

	Evidence-based social sciences practices (raw data) by sectors Evidence-Based Education	Extracted from
20	The first step necessary for evidence-based policymaking is to create and disseminate the under-lying data necessary for policy researchers to produce and provide such evidence. The second step …is the policy research found in the disciplinary journals of the academic research community and written for that academic community using these data. [The third step] … the additional role that United States policy research institutes play by not only contributing to the academic policy literature (especially by researchers from outside-the-Belt-way policy research institutes primarily affiliated with universities) but also to current policy debates inside the Beltway. The fourth step. The Maturation of CEA Members Giving Advice to the President. Policy research institutes in the United States …play important roles in the creation of evidence for evidence-based policymaking via contributions to peer-reviewed publications but, more frequently, in evaluating current policy issues and providing economic analysis of the behavioural and distributional consequences of those current policies.	Burkhauser & Burkhauser, 2024
21	The political risks associated with allowing outside experts to scrutinize organizational practices – for example the discovery of sub-par performance, or even misconduct – are substantial, especially for poorly functioning organizations (Carpenter 2014; Levine 2020; Moffitt 2010).	Goerder et al., 2023
22	…the two principal characteristics of regulatory science (as opposed to academic science) are: (1) that in regulatory science the objective is providing advice for decision making, and (2) the involvement of regulatory agencies (government institutions). The remainder of differences between these two types of science flow from those two characteristics… The regulation of technology is the best example of using scientific knowledge in the shaping, application, and evaluation of regulations and public policies, albeit specifically limited to areas related to technology. In contrast, evidence-based policies are: (1) merely proposals, at least for now and (2) there are currently no government agencies (as in the case of technology regulation) that commission any relevant scientific research.	Luján, 2023
23	Virtually all policy sectors are now informed by scientific advice, allowing some areas like health, social policy, and education to witness a distinctive 'evidence turn' during the past two decades in many OECD countries; organizations like the Campbell Foundation and Cochrane have also been founded to assure such knowledge transfer and application (Zapp & Powell, 2016).	Zapp, 2018
24	There is at least one academic journal (Evidence and Policy) devoted to promoting evidence-based policy. Major think-tanks like the Coalition for Evidence-Based Policy in the US, the Centre for Evidence-Based Policy and Practice, and the Campbell Collaboration in the UK, and Australia's Productivity Commission have all endorsed evidence-based policy strongly.	Watts, 2014
25	…anyone attending to the evidence-based policy literature closely will almost immediately notice that no one seems to entertain seriously the proposition that policy could –or should-ever be only 'evidence-based'. More common is the idea that greater use should be made of evidence which may explain some of the evidence of conceptual muddle. This may explain why it is never clear whether 'conceptualisations' of evidence-based policy are descriptive, normative or simply exhortatory…	Watts, 2014
26	Since the 1990s, most efforts to institutionalize the use of evidence in government have aimed at informing policy formulation in a structure manner. Evaluation (and monitoring) units have been created in ministries of finance (as in Chile), the president's or prime minister's office (South Africa and the UK, respectively), and elsewhere in government (as in Mexico).	Krause & Licona, 2020
27	Evidence-Based Library and Information Practice	
28	Evidence-based practice is an approach to continuously improving professional practice that involves a structured process of articulating questions, collecting, interpreting, and applying valid, reliable, and relevant evidence to support decision-making (Howlett & Thorpe, 2018).	Howlett et al., 2024
29	The evidence-based library and information practice process (arguably) has five steps – articulate, assemble, appraise, apply, assess (Koufogiannakis & Brettle, 2016; Thorpe, 2021). However, Thorpe (2021) recently added 'communicate' as a necessary addition to the well-established '5 A's process'.	Howlett et al., 2024
30	Evidence-Based Policing	
31	Evidence-based policing is 'a decision-making process which integrates the best available evidence, professional judgement and community values, preferences and circumstances'	Klose, 2024
32	Evidence-based policing is 'a new paradigm for police improvement and for public safety' (Sherman, 1998, p. 2).	Klose, 2024
33	…This new paradigm, building on Goldstein's problem-oriented policing, promotes the 'use of the best available research on the outcomes of police work to implement guidelines and evaluate agencies, units and officers' (Sherman, 1998, p. 3).	Klose, 2024

	Evidence-based social sciences practices (raw data) by sectors **Evidence-Based Education**	Extracted from
34	…evidence-based policing has gained significant popularity, particularly in the Anglosphere. Its rise has led to the creation of professional societies and educational programmes in several countries, and become particularly associated with institutions like the What Works Center for Crime Reduction in the UK and the Center for Evidence-Based Crime Policy at George Mason University in the USA; … initiatives such as the creation of an Evidence-Based Policing Matrix (a tool designed to translate research into practice), the launch of the Cambridge Journal of Evidence-Based Policing, or the establishment of an Evidence-based Policing Hall of Fame.	Klose, 2024
35	…proponents for evidence-based policing have promoted different understandings of what passes for best available evidence, which in turn has created considerable conceptual confusion… this article holds that the usage of best available evidence implies the competent review and identification of the most reliable evidence relevant for a particular decision…	Klose, 2024
36	…evidence-based policing as a decision-making process in which practitioners with equal rigour consider not only the best available evidence but also the values, preferences, and circumstances of affected communities.	Klose, 2024
37	Evidence-Based Economics	
38	Replication research to validate policy-relevant findings is important for all research that is used to inform policy and practice. … internal replication research is a crucial element in the production of evidence for evidence-based policymaking, especially in low- and middle-income countries. Despite some evidence of codified replication policies and a growing conceptual interest in the practice, replication research remains an underused tool in social science and international development.	Brown et al., 2014
39	Original authors usually have the most to lose and the least to gain from a replication study of their work, causing them to resist requests for data and code from replication researchers… A replication study that validates the original results should build an original author's reputation, but that only works to the extent that these replication studies are published and publicised. A replication study that refutes the findings or policy recommendations of the original study may not just call into question the original study but also other studies by the same original authors.	Brown et al., 2014
40	Around the turn of the century, three journals – Journal of Political Economy, Empirical Economics and Labour Economics – attempted to promote and publish replication studies but their efforts were generally short lived because of a lack of interest (Hamermesh, 2007, p.723).	Brown et al., 2014

DISCUSSION

The results prove that the research field of evidence-based sciences and practices exists, showing some signs of cohesion. The evidence-based methodology in social sciences was substantially borrowed from EBM, with some issues being adapted and others non-applicable being omitted. The current review findings show that there are no complex and comprehensive studies covering evidence-based methodology applicable to social sciences. The discourse in social sciences gravitates toward individual sectors and disciplines. Only few publications attempted to approach evidence-based social sciences as an emerging research field (White, 2019; White, 2022; Zarghi & Khorasani, 2018). They dwell upon some issues without a profound analysis of the emerging research area. Zarghi & Khorasani (2018) published an opinion piece, with an accent mainly on social work. Evidence-based practice is defined there through the "asking-acquiring-appraising-aggregating-applying-assessing" framework, whereas evidence-based social sciences are described as a new paradigm promoting "more effective social interventions" by the use of the best available scientific evidence in profession decision making (Zarghi & Khorasani, 2018). Though, definitions were offered with-

out an analysis of the existing definitions or philosophical rationale. The afore-mentioned publications by H.White consider the emergence of the major components in China' evidence-based social sciences (White, 2022); and the four waves of evidence revolution (White, 2019).

The review outlined two approaches to evidence-based science and practice. First, it does not go farther than proposals at least for now and no governmental agencies that commission special research for forging new policies (Luján, 2023). Regulatory science aims to work out advice for decision making, and it involves regulatory agencies (Luján, 2023). Second, other authors imply involvement of governmental agencies in evidence-based practices (Lionardo et al., 2024; Pizard et al., 2023) and occasionally use the term "evidence-based science" in the meaning of "regulatory science". Further searches have not retrieved any papers on the distinctions between these two terms. Publications on regulatory science study it as a paradigm (Hilton et al., 2023) or from the point of view that the public effects of any technology must be overwhelmingly examined. Evidence-based science mainly exists separately. The two concepts have little in common. Thus, regulatory science in beyond the research field of evidence-based social sciences and practices.

Both EBM and evidence-based social sciences have their bottlenecks and concepts that ignite heated discussions and varieties of stances: for instance, evidence pyramids in EBM (Murad et al., 2016); RCT and soft data in evidence-based social sciences (Deaton & Cartwright, 2018; Humphries, 2003; Shan & Williamson, 2021; Murdach, 2010).

The thematic clusters identified by the authors as a hypothesis proved to embrace all the reviewed publications. Most publications (22 out of 35) represent research on evidence-based practices. The sparsity of publications on evidence-based social sciences, i.e. methodology and architecture of evidence-based social sciences (4 studies) proved our claim regarding the existing fragmentation of the research field of evidence-based social sciences. The articles in the review are essentially grouped by sectors and disciplines. The scientific disputes also centre around those disciplines and sectors. All studies of general nature originate from EBM. Thus, at present there is no consistent evidence-based methodology for all social sciences and practices.

CONCLUSION

The review findings gave detailed answers to the research questions. The aim of the review was attained. The results add to the emerging field of evidence-based social sciences and practices, aligning our perceptions of evidence in social sciences, their hierarchy, types of evidence, the place of expert opinion and research synthesis in the architecture of evidence-based sciences. The insights into evidence-based science imply more efficient evidence-based practices. The findings could cause more systematic examination of the research field and help develop more elaborate evidence-based methodology for social sciences.

The key limitations of this review are connected to the selection of studies. To get more comprehensive results, the reviews might have interrogated other databases where social sciences are well presented. Possible omission of relevant studies might have occurred due to the exclusion of non-English language studies.

The review outcomes ought to prompt the academic community into studying evidence-based social sciences and practices further. With all rigour and depth of the reviewers in this paper, in further research, the sampling should be re-invented and widened to identify more studies on individual disciplines (evidence-based policymaking, education, policing, social work, managements and other fields where evidence-based methodology is applicable). It may help classify shared components of evidence-based methodology in various disciplines and sectors, outline the divergencies as well as particular or unique features. Scoping and then systematic reviews in individual evidence-based sciences may be valuable in this respect.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Elena Tikhonova: conceptualization, data curation, formal analysis, investigation, methodology, resources, software, validation, visualization, writing – original draft, writing – review & editing.

Lilia Raitskaya: conceptualization, data curation, formal analysis, investigation, methodology, resources, software, validation, visualization, writing – original draft, writing – review & editing

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APPENDIX 1. THE REVIEWED DOCUMENTS

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APPENDIX 2

Evidence-Based Methodology in Social Sciences in the Reviewed Documents

Key Ideas & Concepts	Evidence-based methodology in social sciences (raw data)	Extracted from
Regulatory science vs. academic science	…the two principal characteristics of regulatory science (as opposed to academic science) are: (1) that in regulatory science the objective is providing advice for decision making, and (2) the involvement of regulatory agencies (government institutions). The remainder of differences between these two types of science flow from those two characteristics… The regulation of technology is the best example of using scientific knowledge in the shaping, application, and evaluation of regulations and public policies, albeit specifically limited to areas related to technology. In contrast, evidence-based policies are: (1) merely proposals, at least for now and (2) there are currently no government agencies (as in the case of technology regulation) that commission any relevant scientific research.	Luján, 2023
New production of knowledge (Mode 2 science)	…the 'new production of knowledge' or 'Mode 2 science'(Gibbons et al., 1994; Nowotny et al., 2001). This framework assumes a shift from an academic, disciplinary, and autonomous university-based organization of primarily fundamental knowledge – described as Mode 1 – to a more organizationally diverse, transdisciplinary, applied, and reflexive kind (Mode 2). Proponents of the so-called 'New Production of Knowledge' or 'Mode 2' approach hold that scientific locales multiply and interactions in expanding networks intensify. Joining together the knowledge-producing enterprise are governments, industry, think tanks, consultancies, associations, and activist groups alike, far beyond universities alone.	Zapp, 2018
Evidence revolution	…the evidence revolution, which has unfolded in fours waves over the last 30 years: (1) the results agenda as part of New Public Management in the 1990s, (2) the rise of impact evaluations, notably randomized controlled trials (RCTs) since the early 2000s, (3) increased production of systematic reviews over the last ten years, and (4) moves to institutionalize the use of evidence through the emergence of knowledge brokering agencies, most notably the What Works movement in the United States and the United Kingdom…	White, 2019
Evidence-based practice	EBP is seen as a foundational principle for professionals to continue to learn and maintain theoretical and practical competencies throughout their careers (Babione, 2010; Kazdin, 2008).	Tellings, 2017
Evidence-based practice+	… the move from EBM to EBM+ warrants an analogous move from present-day evidence-based policy (EBP) to EBP+, a new approach to policy appraisal which takes evidence of mechanisms more seriously. Of course, causal claims in the social sciences are not limited to claims about the effectiveness of proposed policy interventions— they also include claims about the causes and effects of societal, economic, legal, geographical, linguistic and psychological phenomena…Evidential Pluralism can be usefully applied to basic social science research, in addition to policy appraisal, because it sheds new light on the evidential relationships involved in establishing causation	Shan & Williamson, 2021
Research synthesis	Use of research synthesis methods has contributed to changes in research practices. In disciplinary literatures, authors indicate motivations to use the methods include needs to (a) translate research-based knowledge to inform practice and policy decisions, and (b) integrate relatively large and diverse knowledge bases to increase the generality of results and yield novel insights or explanations…	Sheble, 2017
Research synthesis	Research synthesis is an empirical research method in which data and findings from primary research studies are analyzed with the goal of generating new knowledge or interpretations. Research synthesis involves formulating a research problem, retrieving relevant literature, evaluating, analyzing, and synthesizing data, and interpreting the results.	Sheble, 2017
Research synthesis	Following the development of contemporary research synthesis methods in the 1970s by psychology and education researchers, such methods, under the labels "systematic review" and "meta-analysis" became an integral component of the evidence-based practice (EBP) movement that revolutionized research use in health and medicine and research practices in education.	Sheble, 2017

Key Ideas & Concepts	Evidence-based methodology in social sciences (raw data)	Extracted from
Reviews as research synthesis	Review publications critically assess prior research in a given area. Reviews include research syntheses such as systematic reviews and other types of reviews such as narrative or historical reviews. Publications with records labeled "Review" in the S/SCI Document Type field are considered reviews. Given that whether there are 100 or more references in a publication is one criteria used to define reviews in the WOS, in some fields, it might be more likely that research syntheses are not categorized as reviews because studies included in a synthesis may not be included in the publication's reference list (Payne et al, 2012)... While the social sciences were the first to engage with the methods, engagement varied greatly across social science fields. In contrast, there was less variation across clinical medicine.	Sheble, 2017
Challenges when conducting systematic reviews	... systematic reviews require access to a wide range of databases and peer-reviewed journals, which can be problematic and very expensive for non-academic researchers and those based in southern research organisations. Promoting systematic reviews as best practice, therefore, sits uneasily alongside donors' interests in developing southern research capacity and in encouraging a more inclusive process of evidence building... In order to achieve objectivity, inclusion and exclusion criteria are used to screen potentially relevant studies. However, there is inevitable subjectivity in the screening process, particularly when high numbers of researchers are involved, as each member of the research team interprets inclusion criteria slightly differently. In our systematic reviews, we classified all studies included in the final analysis according to research design, methodology, data and assumptions made. However, data and methodology are, in general, poorly described in the development studies literature. ...due to time and resource constraints, we had to rely on authors' self-proclaimed research design and results, which introduces another source of bias. ...our systematic reviews did not generate the practical policy recommendations anticipated. Due to the often low number of studies, inconsistency of methodological approaches and lack of meta-analysis, the findings were often too broad, too incomparable and too research-oriented... There are many research questions of qualitative nature that are inappropriate for a systematic review approach. The challenges of assessing qualitative evidence, however, could mean that systematic reviews continue to focus more strongly on quantitative studies and measurable outcomes than they would otherwise. Randomised controlled trials (RCTs) are considered by many to be the 'gold standard' of development research, but there should be a place for all kinds of research.	Mallett et al., 2012
Systematic reviews in evidence-based practice (EBP) within social fields	Evidence-based practice (EBP) within social welfare, education, criminology, and other related fields of interest becomes a necessity to motivate political and social choices, which should be inspired by rational rather than emotional arguments... Campbell systematic reviews are able to guarantee a more efficient use of scientific findings by policy makers. They provide answers to the question "what works?" and summarize the most important findings. Policy makers with limited time to read may find it easier to read ready-made evidence. Results of systematic reviews focus on measurable effects of social, educative, and criminological interventions. They also reveal gaps in existing research in case no answers to the research question are found. And so, they contribute to and provide guidance in the tough discussions on the assignment of limited funds for scientific research. However, policymakers still have to be careful in generalizing results from systematic reviews.	Hannes & Claes, 2007

Key Ideas & Concepts	Evidence-based methodology in social sciences (raw data)	Extracted from
Reviews of evidence: systematic reviews vs systematic maps	Reviews of evidence are a vital means of summarising growing bodies of research. Systematic reviews (SRs) aim to reduce bias and increase reliability when summarising high priority and controversial topics. Similar to SRs, systematic maps (SMs) were developed in social sciences to reliably catalogue evidence on a specific subject. Rather than providing answers to specific questions of impacts, SMs aim to produce searchable databases of studies, along with detailed descriptive information. These maps (consisting of a report, a database, and sometimes a geographical information system) can prove highly useful for research, policy and practice communities, by providing assessments of knowledge gaps (subjects requiring additional research), knowledge gluts (subjects where full SR is possible), and patterns across the research literature that promote best practice and direct research resources towards the highest quality research. The objectives of SMs and SRs are fundamentally similar; to collate and describe all of the available published research evidence on a topic in an objective, repeatable and transparent manner (CEE, 2013). These syntheses aim to be comprehensive and should be undertaken according to an a priori peer-reviewed method (a SM/SR protocol). Publication of a protocol that sets out the planned methodology before the review commences has a number of important benefits.	Haddaway et al., 2016
Evidence	Evidence Biesta (2010) explains that "evidence" is not the same as "truth" or "knowledge" but that it can play a part in justifying true beliefs—justified true belief being one definition of "knowledge" (Biesta, 2010)	Tellings, 2017
Evidence	… "evidence" is not the same as "proof"(Oancea and Pring, 2009). What counts as evidence depends on the type of research undertaken, and this in turn depends on the kind of research question that is asked. According to the authors, observable data could be "evidence" but also arguments (in philosophical reasoning) or previous judgments (in legal research)…	Tellings, 2017
Hard data	… one might say that quantitative designs use hard observable data which can be statistically verified whereas qualitative designs focus more on understanding what they research in other ways…	Tellings, 2017
Social sciences: human choices	In most social science empirical research, much of the focus is on statistical methods and the assumptions needed to justify the use of certain methodologies. The assumptions researchers make, the indicators they select or create to measure social and economic concepts, and the estimation methods they employ, are all human choices and not controlled lab conditions or biological and physical properties.	Brown et al., 2014
Overcoming publication bias	The solution most often recommended for the publication bias challenge is research registration. Registries are only part of the solution though. Most do not require submission of a complete analysis plan, so registrants still have quite a bit of latitude in what they report beyond the basic hypotheses entered into the registration form. Registration is also quite new in the social sciences. Even as journals and funders start to require registration, it will be years before the majority of published articles will have a public registration on file. Replication research is another way to test an article for reporting and publication bias.	Brown et al., 2014
Replication research	Replication research is …[a] way to test an article for reporting and publication bias. …a typology for approaches to internal replication research: pure replication; MEA (measurement and estimation analysis) TCA (theory of change analysis)	Brown et al., 2014
Replication policies in journals	The journals' replication policies are grouped into five categories: confirmed to have no replication policy non-applicable (does not publish original research) or no answer to repeated inquiries about replication policy promotes replication as an important practice but has merely a soft or informal policy has a data accessibility policy with no mention of replication-ready data has a robust replication policy and standards for data accessibility	Brown et al., 2014

Key Ideas & Concepts	Evidence-based methodology in social sciences (raw data)	Extracted from
Specific features of social science empirical research	Even accounting for the recent popularity of randomised controlled trials (RCTs) in the social sciences, social science empirical research is not like the medical and natural sciences. In a medical efficacy trial, the focus is on precisely determining and controlling the conditions of the trial so that the result is as simple as a comparison of the observed outcomes. For such trials, validation often comes from external replication (a new trial is conducted on a newly drawn sample of patients) rather than from recalculating the comparison of the outcomes. In most social science empirical research, much of the focus is on statistical methods and the assumptions needed to justify the use of certain methodologies. The assumptions researchers make, the indicators they select or create to measure social and economic concepts, and the estimation methods they employ, are all human choices and not controlled lab conditions or biological and physical properties.	Brown et al., 2014
Categories of soft data	Hard data is typically defined as evidence that is measurable, quantifiable, and subject to verification by test or recognized standards of scientific inquiry (Graziano & Raulin, 1997). Although evidence-based practice methods are desirable, the requirement of such methods for solid scientific data is not currently realizable in many types of direct practice in social work (Reid, 1995). For this reason, most direct service practitioners must still attempt to provide quality service to their clients by relying on less than scientific evidence for most of their clinical decision making (Aisenberg, 2008)… Categories of Soft Data Accounts are clients' "stories" about the events that have brought about their current situations and problems (Neimeyer & Stewart, 2000). Explanations are statements that attempt to clarify why and in what ways the problem, condition, circumstance, or situation in question "exists, . . . or is true" (Moore & Parker, 1986). Interpretations are efforts to make sense of events so that some course of action can be decided on (Gergen, 2002). Arguments, in critical thinking terms, are not contentious debates or disagreements but are, instead, justifications offered by a client that support and rationalize often difficult decisions or plans (Crusius & Channell, 2000; Gambrill, 2006). Broadly defined, nonverbal communication is all aspects of communication "other than words" (Wood, 2002) and can include all nonverbal aspects of social interaction in physical environments, manner of dress, mood, facial expression, rate of speech, gesture, and body language (Kadushin, 1997; Wood, 2002).	Murdach, 2010
Evidence architecture in China: good and bad issues	When China began opening the economy in the mid-70s, it did so through experimentation. Whilst not organized as randomized controlled trials, the government tried out different incentive systems for farmers, firms and workers and learned from the results… To start with the good news, the number of effectiveness studies is increasing… There are also emerging elements of an 'evidence architecture' for the social sciences. Now, for the bad news. First, regarding the research there are three issues: (1) the capacity for primary research remains very uneven, (2) many published papers are of low quality in reporting and methodology, and (3) activities are concentrated amongst a small number of researchers and research institutions…	White, 2022
Systematic reviews and research bias in China	With the enormous expansion in research literature, SRs play an important role in summarizing the findings from bodies of research. However, the rapid increase in the production of systematic reviews has raised concerns about whether reviews themselves are exacerbating information overload (Riaz et al., 2016). As SRs play an important role in the assessment of interventions and guide policy and practice it may be that the focus should be on quality not quantity. In recent years, the number of SRs and meta-analysis studies in China has increased rapidly, but some studies have suggested that the quality is uneven (Tian et al., 2017). Furthermore, there is no research evaluating whether bias exists in research design, implementation and reports, including normative metrics of the title, adequacy of the introduction, clarity of the data sources, adequacy of the data analysis, etc. Similarly, no studies have clearly reported on the topics covered by systematic review and meta-analyses in the social sciences.	Bai et al., 2022

Key Ideas & Concepts	Evidence-based methodology in social sciences (raw data)	Extracted from
Evidence-grading schemes in social sciences	...social sciences have witnessed, during the past few decades, a phenomenal growth in applications of modern measurement and statistical techniques but lagged behind in rigorous research designs as efforts to generate sound evidence... A major reason for development of evidence grading schemes is that policy decisions are increasingly based on evidence from empirical studies. The evidence from these studies, or the studies selected as evidence, can be either equivocal or biased. At their best, systematic reviews of evidence based on good evidence grading schemes can reduce the possibility of biases and screen out studies that are equivocal. Since the 1990s, a number of organizations have been created to develop evidence grading schemes...These organizations include: Cochrane Collaboration (health); Campbell Collaboration (education, crime, welfare); Society for Prevention Research Committee on Standards; What Works Clearinghouse (WWC) of the US Department of Education; National Registry of Evidence Based Programs and Practices (substance abuse); Blueprints for Violence Prevention (juvenile justice and delinquency); Coalition for Evidence Based Policy; California Evidence-Based Clearinghouse for Child Welfare; and Best Evidence Encyclopedia (education)... The main scientific presumption is that RCTs, when conducted properly, yield the least equivocal and least biased estimates of the effects of the program under study relative to a control condition or a competing program. However, it is not always possible to mount RCTs to estimate the effects of a program. Consequently, their standards also acknowledge studies that produce more equivocal findings. For instance, the Campbell Collaboration admits quasi-experiments in its evidence standards. Nonetheless, Campbell reviews (and others) are required to separate out the results of randomized controlled trials from the results of the quasi-experiments. Similarly, the WWC in education gives a higher ranking to evidence from well conducted randomized trials than it gives to evidence from well conducted quasi-experiments.	Boruch & Rui, 2008
Evidence-based practice in Sweden	The importance of implementing evidence-based practice (EBP) in social services has been stressed by the Swedish Government in 2008, concluding that existing practice was inadequate and not knowledge-based (Swedish Government Inquiries, 2008, p. 9)... The practice "requires a bottom–up approach that integrates the best external evidence with individual clinical expertise and patients' choice" (Sackett et al., 1996, p. 72). The large-scale, national EBP initiative implemented in Sweden in 2010–2016, aimed to develop an effective, transparent and knowledge-based social service that would benefit the individual service user (Swedish Government, 2010, 2011), was based on EBP knowledge (Eliasson, 2014). Putting available knowledge into practice according to the EBP concept is problematic... Among obstacles are: using a top–down approach; ignoring professional and practical research development (Börjeson and Johansson, 2014); focusing on making research knowledge available to practitioners; having an instrumental and decontextualized view of EBP (Avby, 2018).	Schwarz & Tilling, 2009

Online Learning in Modern Digital Era: A Distance Training Program for Greek Language Teachers

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ABSTRACT

Purpose: The purpose of this study, which was part of a broader research on Greek minority education in Albania, was the evaluation of a training program tailored to language teachers' needs who teach Greek in bilingual/intercultural environments. In particular, the study attempted to contribute the development of an integrated framework for the training of language teachers in the modern educational process. Specifically, distance training was carried out, in modern and asynchronous environments through a training platform. According to the mapping of the needs of the Greek Language teachers in bilingual educational environments throughout Albania and based on the specifications dictated by the international literature, 10 thematic modules were designed with modern methods in the instruction of Greek.

Method: The training program was implemented in 43 language teachers of Greek minority education in Albania from the area of Argyrokastro, Delvino and Agioi Saranda. For the evaluation of the program four forms were utilized that were carried out at different stages of the program: a) Initial, b) Formative, c) Final and d) Follow-up Evaluation. To collect the quantitatively data, four questionnaires were distributed at all stages of the training program to trainees.

Results: The results indicated the effectiveness of the training program and highlighted the active involvement of trainees in all stages of the program. It revealed the development of teachers' ability to take decisions in order to improve daily teaching routines with the ultimate goal of achieving a quality language education in bilingual/intercultural environments. The trainees acquired, through digital learning processes, the ability to implement innovative language activities in their classrooms, laying the foundations for the consolidation of a modern way of thinking of language teachers.

Implications: The collection of data will contribute to the implementation of more effective training programs in the region and the application of modern teaching methods by teachers who teach in bilingual/intercultural environments in general.

KEYWORDS

Greek minority education, teachers training, Greek language teachers, bilingual learning environments, distance training program

INTRODUCTION

In modern educational environments, teachers' training constitutes the response to the constantly changing educational conditions (Sadeghi & Richards, 2021). A well trained teacher uses and implements modern methodological approaches and at the same time he/she adopts a critical attitude towards teaching and the educational environment as a whole (Al-Issa & Al-Bulushi, 2010). Training can equip teachers with the necessary knowledge and skills for the modernization of educational work in the contemporary era, with the goal of improving the entire educational system (Malik, 2018). Moreover, training activities constitute the cornerstone of education, gradually guiding the language teacher towards reflective thinking (Korthagen, 2017), providing a deeper understanding of processes, and offering an effective language teaching.

In this direction, and based on the innovative pedagogy (Kukulska-Hulme et al., 2020), language teacher training is modernized through innovative, and contemporary educational methods that are "translated" into the Blended Learning Model (Crăciun, 2019). More specifically, distance learning constitutes an innovation within a constantly changing social, educational, and cultural environment (Lassoued et al., 2020; Sadeghi, 2019; Zawacki-Richter, 2021). In a framework that promotes interaction, collaboration, and self-directed learning in digital environments, the involvement of teachers in authentic learning situations is enhanced, with distance learning evolving and establishing itself as the most flexible professional development approach in the modern era (Simonson et al., 2019). In fact, according to the requirements of the European Union, training programs for language teachers should be based on modern training methods, taking advantage of the benefits offered by information and communication technologies. Moreover, distance education is a continuous and constantly evolving process that contributes to the creation of environments that eliminate any time and spatial constraints. In such a context, teachers' training is a challenge for teachers themselves (Sert, 2021), with the contemporary educational reality being the determining factor regarding the position and role of training programs in the overall educational process (Pokrovskaia et al., 2021). More specifically, the combination of synchronous and asynchronous digital environments has a catalytic impact on shaping positive attitudes among the trained teachers, mobilizing and actively engaging them, enhancing students' academic performance, and promoting flexibility, creativity, accessibility, and effectiveness of

language teachers (Blignaut et al., 2010; Crawford & Jenkins, 2018; Holmes & Prieto-Rodriguez, 2018). In this way, they will develop students' skills of the 21st century, contributing to the establishment of a modern and scientifically substantiated educational framework regarding the language lesson for future citizens.

For the purpose of the study, the following objectives were set:

(1) To identify the training needs of Greek minority education teachers in Albania

(2) To record their preferences and their suggestions regarding the implementation and evaluation of training programs

(3) To estimate the contribution of the blended distance learning training program to the development of their content knowledge and skills.

(4) To estimate the effectiveness of the distance training program as evaluated by the teachers themselves.

Literature review

The concept of lifelong training (see Figure 1) refers to a modern teacher characterized by essential components that include: a) modern and diverse forms of literacy, b) mathematical thinking, c) multicultural awareness, d) digital literacy, e) personal learning, f) entrepreneurial thinking, and

Figure 1

Professional Learning Model (European Commission, 2018)
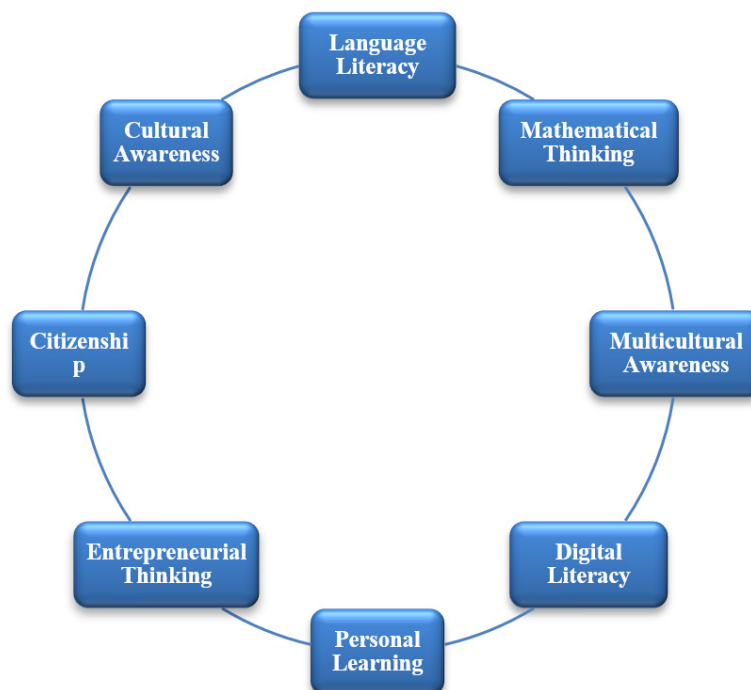
g) citizenship (Al Khateeb, 2017). In fact, important for the modern teacher are the following characteristics (European Commission, 2018): Critical thinking, problem-solving, collaboration, metacognitive skills, communication skills, creativity, and intercultural skills.

In recent years the need for long-term and well-organized educational programs has become more pressing than ever (Floyd, 2022). In this context, language teachers in bilingual/cross-cultural environments seek the establishment of an organized training policy (Cortina & Earl, 2020) in order to familiarize themselves with modern language teaching methods and enhance their teaching skills.

Indeed, the training of teachers who will participate in the educational system of Albania and teach the Greek language is challenging and fragmented, lacking a comprehensive framework as the issue of training teachers in Greek minority education in Albania has not been a major concern for educational policy planners (Barkas, 2015). Training has, until now, been primarily a personal matter for each teacher in the region, depending on their individual intention to keep up with developments in language teaching. Given the incomplete training of teachers in Greek minority education in Albania the undertaking of this research is deemed particularly essential.

Due to the fragmented teachers training in the Greek minority education in Albania, the implementation of the present research is deemed particularly necessary. Specifically, the systematic bibliographic research demonstrated the absence of studies related to the issue to be investigated in the field of teacher training for Greek minority education in Albania and a lack of research coverage of the subject of Greek language teaching in bilingual/intercultural learning environments was found, in a period of intense research effort in teacher training at an international level (Sorkos & Hajisoteriou, 2021).

In the international literature, some studies concerning the training of Greek language teachers in bilingual/intercultural environments were found (Anastasiadis & Manousou, 2016; Bikos, 2014; Bikos & Tzifopoulos, 2012), but even there it is observed research gap regarding the design, implementation and evaluation of training programs for Greek Language teachers in Greek minority education in Albania. It is therefore an original study applied to trainees who teach in a different educational context and that requires the adoption of different techniques and practices for teaching the Greek language in bilingual/intercultural environments in the country.

The present research aims to present a comprehensive proposal that includes the evaluation of training program for Greek language teachers within the Greek minority edu-

cation system of Albania. The ultimate goal is to introduce a comprehensive training framework for Greek language teachers within minority education system in Albania, utilizing the advantages and practical application possibilities offered by modern training models. Thus, pertinent questions are raised about the training offered to Greek language teachers working in bilingual/cross-cultural environments in Albania. Moreover, their training needs are examined in relation to theoretical aspects of language development and contemporary approaches and methods for teaching the Greek language. Furthermore, the contribution of the distance learning training program to the development of knowledge, skills, behaviors, values, and attitudes of teachers regarding the Greek language is assessed. The study aimed at investigating the effectiveness of the distance education training program in both synchronous and asynchronous digital learning environments as perceived by Greek Language teachers in the Greek Minority Education System of Albania.

The Context of Greek Language Education in Modern Albania

Formal Education

The education system in Albania consists of the nine-year basic education, which is compulsory for all students and is equivalent to the primary and secondary education provided in the Greek education system (Tigas, 2014). The next level of education is the tertiary level and includes two types of schools: the General Lyceum, which lasts for three years and the Vocational Lyceum which lasts for two years (first level of study), three (second level), four years (third study level), with the last level giving the possibility of admission to the Higher Educational Institutions of the country. Moreover included above the basic structure of the Albanian educational system is the Greek-language education of the Greek minority. Public minority schools operate in those areas traditionally inhabited by the Greek minority, under the auspices of the Albanian state, and more specifically in the areas of Argyrokastro, Delvino and Agioi Saranda (Rapti, 2014). The curriculum of minority schools, depending on the level, include the teaching of Greek as an independent language course, otherwise the program is conducted exclusively in Greek. Greek language education follows the mandatory nine-year education in which the teaching of the Greek language is an integral part, with a progressive reduction of hours in the last grades. Regarding secondary education, the Greek language is taught two hours a week in all higher-level schools located in the minority zone and attended by students of Greek origin. Apart from the public Greek-language minority schools in Albania, there are also private schools funded by the Greek Ministry of Foreign Affairs and the Ministry of Education. These are the bilingual

school "Omiros" in Kortsa and the minority school "Omiros" in Himara (Sotiroudas et al., 2020).

Non-Formal Education

Students are also able to learn the Greek language through the private Greek language tutoring institutes which operate in both minority and non-minority areas. These respond to the needs of Greek language education from a public that varies according to their expectations but also their language skills and the level of their L1/L2 language.

METHOD

Based on the objectives of the study and in an effort to ensure a more complete and valid perspective of the problem and to achieve the collection of reliable data, four questionnaires were given to the trainees: a) a teachers' needs questionnaire, b) a teachers' expectations questionnaire, c) a final evaluation questionnaire, d) a follow up questionnaire. In this way, we tried to ensure a more complete and valid perspective of the issue under negotiation, contributing to a more comprehensive and complete assessment of the issue (Griva & Stamou, 2014).

Participants

The training program was tailored to the needs of 43 teachers employed in the Greek minority education in the areas of Argyrokastro, Delvino and Agioi Saranda of Albania (see table 1).

The application of the Addie model in the present training program

The training program was designed based on the blended learning model, combining both synchronous and asynchronous methods. By putting the trainees at the center, the ADDIE model shaped the ideal training environment so that all the content of the program can be adapted to their own needs and desires. This particular model allowed the researcher to design the training program in successive stages, taking into account the continuous evaluation of the course of the program (Dick & Carey, 2001). The stable structure offered by the specific model contributed to the creation of an effective work plan that will bring a desired result to the educational process. According to Branch (2009), the ADDIE educational design model adapts to the special characteristics and needs of each learner depending on the content, learning space and time of each individual. Taking into account the teachers needs and preferences, the modern approaches of language teaching and the principles of adult education, we created a more alternative training program based on: teachers' self action, teachers' self assessment, teachers' reflection on the training process.

The "Learnworlds" training platform

The selection criteria of the "LearnWorlds" digital platform for our training program were: a) its usability, b) its flexibility, c) its evolvability, d) its stability, e) its safe environment it offers and g) its interactivity, h) it platform's user-friendly interface. The design for training purposes, as well as its use in international literature (see Palaigerogiou & Papado-

Table 1

Demographic Characteristics of the Trainees

Gender	Man		Woman					
	16.3%	**7**	**83.7%**	**36**				
Age	21-30		31-40		41-50		50+	
	7.0%	3	20.9%	9	46.5%	20	25.6%	11
Years of service	1-5		6-10		11-20		20+	
	11.6%	5	7.0%	3	34.9%	15	46.5%	20
Position in education	School Director		Teacher					
	16.3%	7	83.7%	36				
Undergraduate studies	Department of Greek Language, Literature and Greek Culture		Academy of Greek Studies		Faculty of Education Sciences		Other	
	69.8%	29	11.6%	5	16.3%	7	4.7%	2
Master's studies	Postgraduate		Other undergraduate degree		Ph.D.		Other	
	20.9%	9	9.3%	4	2.3%	1	2.3%	1

poulou, 2019; Papadopoulou & Palaigeorgiou, 2016), played a key role in its selection for the implementation of the present training program. "LearnWorlds" provides various services such as: interactive videos, gamified learning environment, content management, material repository, award and achievement system, communication and various other functions.

The digital training environment

The program was designed around ten thematic modules, including modern methods of teaching language skills and strategies, intercultural communication skills and strategies as well as language assessment. Every module was carried out through three stages:

- The first stage "Time to Begin!"
- The second stage " Put It into Action!" and
- The third stage "It's time to Create!"

The first stage: "Time to Begin!"

In the first stage, the trainees watched a video including the necessary information on the context of the module. The video gave information at a theoretical level but also useful practical applications for the implementation of all this information that they took at a theoretical level (Anastasiadis & Spantidakis, 2013). The ultimate goal was through the practical orientation activities to redefine the way and type of language course teaching through the most modern teaching and pedagogic methods.

The second stage: "Put It Into Action!"

In the second stage, the trainees were asked to carry out some closed type activities related to certain practices and the trainees got immediate feedback on their performance. In this second stage of each thematic educational module there were six categories of activities from which teachers received direct feedback, such as crosswords, multiple choice questions etc.

The third stage: "It's time to Create!"

In this stage, trainees were given the opportunity to design for their class a lesson plan or perform a creative activity which was uploaded to the platform. There were meaningful material-making processes, to critically explore the subject under study in authentic learning environments (Palloff & Pratt, 2013) through alternative ideas, information seeking, allowing their creative expression, just as the modernization of the language course is required.

Data analysis

Analysis of the questionnaire data

The data derived from the questionnaires were analyzed quantitatively, using SPSS software (26th edition) with which the frequencies obtained from the responses of the trainees were recorded. The processing of the data resulting from the answers of the participating teachers to the closed and "open" type questions was implemented at the level of inductive statistics. More specifically, using tools of descriptive statistics, the frequencies resulting from the answers of the teachers of the Greek minority education in Albania were recorded and the corresponding graphs were created. A thorough examination was conducted to explore the correlation between the independent categorical variables of the four questionnaires with respect to each sub-question-criterion of the questionnaire, which constitutes either a categorical or ordinal variable (on a five-point Likert Scale). The categorical variables of the questionnaire included the age groups of the respondents (21-30 years, 31-40 years, 41-50 years, and over 50 years), their years of working experience in education (1-5 years, 6-10 years, 11-20 years, and over 20 years), as well as their position (whether they are regular educators or school unit Directors), and a Chi-square test of independence was performed.

The teacher Needs Assessment Questionnaire

The teachers' needs assessment questionnaire was distributed before the planning of the training program, at a time when all the teachers of the Greek minority education in Albania were gathered in the area of the Department of Greek Language, Literature and Greek Culture, in a special event, dedicated to the World Day of the Greek Language, in the presence of the researcher. The questionnaire included 70 questions which were grouped into the following four thematic axes: a) Training Experience, b) Expectations from the Training Programs, c) Training Needs, d) Suggestions for Future Training Programs.

The teacher Expectation Questionnaire

The teacher expectation questionnaire was designed by the researchers with the purpose to identify the teachers' expectations toward a future training program that would be implemented in the region. It consisted of 16 closed-ended questions on a five-point Likert scale and 2 "open-ended" questions were also included in order to map the teachers' orientation in terms of those modules they wish to receive training on.

The Evaluation Questionnaire

The evaluation questionnaire administered to the trainees as part of the final evaluation of the training program consisted of 46 closed-ended questions and three "open-ended" questions which were included in the following eight thematic axes: a) General Assessment, b) The Training Material, c) The training Activities, d) The Trainer, e) Organizational Issues, f) Overall Evaluation of the training program g) Quality of the Training Program and h) Suggestions about future training.

The Follow up Questionnaire

The follow up questionnaire administered to the trainees six months after completing the training program taking into account the results of the final evaluation questionnaire as well as the research questions of the survey and consisted of a total of 12 closed-ended questions and 4 "open-ended" questions.

RESULTS

Results from the Need Assessment Questionnaire

The educational needs of the teachers regarding the cognitive subject

As for the theoretical issues related to the language development, the majority of the participants showed a strong interest in language development and learning strategies in bilingual environments (60.5%), a strong to very strong interest in strategies for enhancing students' reading and writing skills in the Greek language (39.5% and 39.5%, respectively), and a high interest in evaluating the language course (41.9%).

Results from the teacher expectation questionnaire

The expectations from the training program

The data concerning the demographic variables of the participants are the same as those in the first questionnaire. On Table 3, the details are presented concerning the responses related to the expectations of the respondents from the training program. Specifically, the majority of teachers express a very high expectation of gaining valuable knowledge for teaching the Greek language (74.4%) and they expect the program content to be characterized by its relevance to everyday teaching practices (86.0%).

Results from the evaluation questionnaire

Overall evaluation of the Training Program

On Table 4, the data concerning the overall evaluation of the training program are recorded. Specifically, the majority of trainees state that they were greatly helped to understand modern methods and teaching techniques for the Greek language (85.4%), to implement modern methods and teaching techniques (70.7%), to develop appropriate strategies for enhancing reading and writing skills in their classrooms (73.2%), as well as listening and speaking skills (73.2%), to develop lesson plans tailored to meet the specific needs of their students effectively (78.0%), to become familiar with new methods of assessing language lessons (75.6%) and to change their perspectives regarding their approach on teaching the language course (75.6%).

The Benefits of Participating in the Training Program

Table 2

Teachers' Responses Based on the Preference Level for Training in Communication and Language Strategies

Communication and language Strategies	a) Language learning strategies in bilingual environments		b) Reading and Writing strategies in the Greek language		c) Assessment of language skills and strategies	
	N	%	*N*	%	*N*	%
Very strong interest	26	60.5	17	39.5	17	39.5
Strong interest	11	25.6	17	39.5	18	41.9
Moderate interest	4	9.3	7	16.3	8	18.6
Low interest	2	4.7	2	4.7	0	0
No interest	0	0	0	0	0	0

Table 3

Teachers' expectations regarding the acquisition of skills

Expectations of skill acquisition	a) Contribution to the acquisition of knowledge for teaching the Greek language		b) Providing ideas in developing activities	
	N	%	*N*	%
Extremely	32	74.4	37	86
Very much	6	14	6	14
Moderately	4	9.3	0	0
Slightly	1	2.3	0	0
Not at all	0	0	0	0
No response	0	0	0	0

Table 4

Teachers' responses regarding the Overall Evaluation of the training program

Overall Evaluation of the Training Program	a) understanding modern methods and teaching techniques for the Greek language		b) implementing modern methods and teaching techniques when teaching the Greek language		c) developing appropriate strategies for enhancing reading and writing skills in the classroom		d) developing appropriate strategies for listening and speaking skills		e) developing lesson plans tailored to meet the specific needs of the students effectively		f) becoming familiar with new methods of assessing language lessons		g) changing the perspective on the approach of teaching the language course	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	N	%
Extremely	35	85.4	29	70.7	30	73.2	30	73.2	32	78	31	75.6	31	75.6
Very much	5	12.2	9	22	10	24.4	10	24.4	7	17.1	9	22	10	24.4
Moderately	1	2.4	3	7.3	1	2.4	1	2.4	2	4.9	1	2.4	0	0
Slightly	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not at all	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The benefits that the participants believe they obtained through their participation in the training program are shown on Table 5. Specifically, trainees mention the improvement of their teaching skills as one of the benefits (36.6%), getting familiar with modern methods and techniques for teaching the Greek language (58.5%), implementation of modern teaching methods and techniques for teaching the Greek language (58.5%), improvement in organizing language lessons (12.2%), enhancement of language skills in the Greek language (12.2%), application of suitable strategies for enhancing reading and writing skills in the classroom (14.6%), getting familiar with teaching the Greek language using computers (14.6%), and strengthening their professional profile (17.1%).

Results from the Post-Feedback Evaluation Questionnaire

Overall Evaluation of the Training Program

On Table 6, the results concerning the overall evaluation of the training program are recorded. From the trainees who responded to these specific questions, 94.7% state that upon returning to school, they utilized the knowledge and skills acquired through the program. They found it easy to apply the new knowledge and skills in their classrooms. Moreover, they state that after the program, they implement contemporary methods and techniques for teaching the Greek language, as well as strategies for enhancing reading and writing skills, with greater ease. On the other hand, 5.3% of the trainees were not sure. All teachers (100%) state that after

the program, they apply appropriate listening and speaking strategies in their classrooms with greater ease.

Results of Inductive Statistics

Results from the questionnaire recording training needs based on inductive statistics

The independence tests regarding the questionnaire for identifying training needs, revealed the following correlations:

Differentiations based on years of working experience. Trainees with 1 to 5 years of working experience believe that they need greater training support from the Greek state, especially when compared to other trainees, particularly those with 6-10 years of experience. ($p = 0.021 < 0.05$).

Trainees teachers with 20+ years of experience, and secondarily those with 11-20 years of experience, believe that for the purposes of the training program, the content should be more closely related to daily educational practices, to a greater extent compared to trainees with 1-5 and 6-10 years of experience ($p = 0.031 < 0.05$).

Differentiations based on the age. Trainees aged 41-50 prefer the distance training programs to a greater extent compared to trainees aged 21-30 ($p = 0.041 < 0.05$). Trainees aged 50 and above express the need for more training support from the Greek state, in a higher percentage compared to trainees aged 41-50 ($p = 0.001 < 0.05$).

Results of the expectations scale based on inductive statistics

The independence tests concerning the expectations scale revealed the following correlations:

Differentiations based on years of working experience. Trainees with 11-20 years of experience as well as those with 20+ years of experience expect to a greater extent that the implementation pace of the training program is not exhausting, compared to trainees aged 21-30 ($p = 0.027 < 0.05$).

Differentiations based on the position they hold in education. Head teachers prioritize the incorporation of carefully chosen examples and applications in the effectiveness criteria, to a higher extend compared to other teachers ($p = 0.045 < 0.05$).

Table 5

Teachers' agreement on the benefits of the training program

Benefits of Participating in the Training Program	Yes		No	
	N	%	N	%
a) Enhancement of teaching skills	15	36.6	26	63.4
b) Getting familiar with modern methods and techniques for teaching the Greek language	24	58.5	17	41.5
c) Implementation of modern teaching methods and techniques for teaching the Greek language	24	58.5	17	41.5
d) Improvement in organizing language lessons	5	12.2	36	87.8
e) Enhancement of language skills in the Greek language	5	12.2	36	87.8
f) Application of suitable strategies for enhancing reading and writing skills in the classroom	6	14.6	35	85.4
g) Getting familiar with teaching the Greek language using ICT	6	14.6	35	85.4
h) Strengthening their professional profile	7	17.1	34	82.9

Table 6

Teachers' responses according to the agreement on the improvement of teaching methods

Evaluation of Teaching Methods Improvement	Yes		No		I'm not sure	
	N	%	N	%	N	%
a) After completing the program, incorporating contemporary methods and teaching techniques within my Greek language classroom becomes easier for me	36	94.7	0	0	2	5.3
b) After attending the program, I develop with greater ease in my classroom suitable strategies regarding Reading and Writing skills	36	94.7	0	0	2	5.3
c) After attending the program, I apply with greater ease in my classroom appropriate Listening and Speaking strategies	38	100	0	0	0	0

Differentiations based on the age. Trainees aged 41-50 expect to engage with new contemporary Greek language teaching methods through the training program, to a greater extent compared to trainees aged 21-30 (p = 0.012 < 0.05).

Results of the final evaluation questionnaire based on inductive statistics

Differentiations based on years of working experience. From the independence tests concerning the final evaluation questionnaire, only one statistically significant correlation emerged: In the benefits of the training program, trainees with 20+ years of experience include the strengthening of their professional profile to a greater extent compared to other trainees (p = 0.027 < 0.05).

Results of the follow up questionnaire based on inductive statistics

From the independence tests concerning the follow up questionnaire, no statistically significant correlation emerged.

DISCUSSION

In the present study, participants expressed strong dissatisfaction with the absence of an organized educational policy that aligns with their actual needs and contemporary educational developments. These results are consistent with previous research on Greek minority education in Albania (Barkas, 2015; Hemming et al., 2012; Vouri & Kapsalis, 2003) and provide an overview of the training landscape in the country. The vast majority of trainees identified the lack of training support as a significant issue. Conversely, international literature highlights that trainees often prioritize improvements in school infrastructure (Kanellopoulou & Darra, 2018; Sakkoulis & Vergidis, 2017). This finding underscores the importance of organizing training programs in Greek minority education in Albania to ensure that trainees are equipped with contemporary teaching methods for the Greek language.

Interestingly, differences in trainee opinions were observed based on years of experience. Those with fewer years of experience felt a greater need for training support from the Greek state compared to more experienced trainees. Conversely, more experienced trainees felt better prepared to teach the Greek language. This indicates a need for younger teachers to update their knowledge and stay informed about modern teaching methodologies within the evolving educational environment. Furthermore, most trainees expressed that they do not feel fully prepared to teach the Greek language and require more training in contemporary teaching methodologies, particularly in developing productive and receptive skills. Mede and Atay (2017) found that foreign language teachers also need training in teaching productive skills, whereas Vogt, Tsagari, and Spanoudi

(2020) reported that foreign language teachers did not feel the need for training in teaching receptive skills.

Specifically, teachers in Greek minority education in Albania expressed a desire for theoretical knowledge on developing productive and receptive skills, language development theories, and intercultural communication. Implementing a free distance learning training program that considers modern educational developments and promotes participant autonomy is necessary. These findings align with international literature (Konovalenko et al., 2021; Simonson et al., 2019), which supports distance learning as an innovative tool for contemporary teacher training programs.

Older trainees preferred distance training programs more than their less experienced counterparts. In contrast, younger trainees, familiar with information and communication technologies and recent graduates, favored training programs at the University of Argirokastro. This finding contrasts with other studies (Adam & Metljak, 2022) but emphasizes the necessity of distance learning programs in the region. Older trainees may see distance learning as a challenge (Kraiger et al., 2022), while younger trainees express positive views on university-based programs.

Teachers who participated in the training program specialized in contemporary methods for teaching Greek in modern educational contexts (Bouras, 2020). They focused on classroom management, lesson planning, and developing reading, writing, and communication strategies using new teaching methods. They also learned effective communication strategies and new methods for assessing language lessons. International literature (Bouras & Griva, 2022; Griva & Stamou, 2014; Kubanyiova & Crookes, 2016; Raud & Orehhova, 2022) emphasizes the importance of training language teachers in contemporary methods for bilingual/intercultural environments.

Most trainees expressed the need to update their undergraduate knowledge and implement innovative methods in Greek language teaching. Training programs that help analyze student needs are effective in transforming educators' thinking about lesson management (Ramírez-Montoya et al., 2021). The training program provided theoretical and practical knowledge to Greek language teachers in Albania, enabling them to meet new educational needs. The motivation to implement innovative methods changes trainee behavior (Charoensap-Kelly et al., 2016) and improves teaching skills, with the goal of applying theoretical knowledge in daily practice (Harris & Sass, 2011).

The key innovation of the training process was the implementation of a distance learning program in both synchronous and asynchronous digital environments. Trainees focused on the modern digital environment (Fengfeng et al., 2016), emphasizing its user-friendly interface and the positive experience it created. They highlighted the contribution of tel-

econferencing to better communication and collaboration (Moumoutzis et al., 2018). Online meetings provided valuable feedback on educational materials and addressed questions during thematic sessions (Ramadani & Xhaferi, 2020). This created a comprehensive exchange of ideas among trainees, rather than just a simple exchange of plans. The contemporary training environment provided more stimuli, leading to complex experiences and a methodical approach to teaching Greek in bilingual/cross-cultural settings (Brevik et al., 2019). Trainees discussed and selected appropriate strategies and techniques for their classrooms (Arghode & Wang, 2016). This empowering digital environment helped redefine essential teaching elements and boosted trainees' confidence through an exploratory process (Sun et al., 2018).

In the context of this research, several limitations should be considered. The number of participants in the training program was limited due to the inherently small sample size, as the number of teachers in Greek minority education in Albania is restricted. In fact, the vast majority of Greek teachers in the region participated in this training program. Additionally, the absence of a control group poses a limitation; this arose because the program was piloted with only one group of teachers (the experimental group), preventing the observation of potential differences between groups. Lastly, the researcher had a dual role, also serving as the trainer for the program. To mitigate any potential bias from this dual role, anonymous questionnaires were administered at all stages of the program.

CONCLUSION

The findings of this study provided modern and innovative perspectives on distance learning programs designed for language teachers. The training program, implemented in both synchronous and asynchronous digital environments, was highly positively evaluated. The participating trainees actively engaged in creative digital activities for teaching the Greek language in bilingual contexts, effectively managing the continuous transitions educators face in the modern era. Information and communication technologies offer variety and flexibility in learning methods and processes. The

implementation of this training program thus serves as a foundation for developing and evaluating future training programs for language teachers in bilingual and multicultural environments. In a future study, it would be valuable to identify and record any changes in teaching approaches applied by the trained teachers after completing a training program. Additionally, evaluating existing institutions aimed at training language teachers in bilingual and multicultural environments would help outline a comprehensive picture of their functioning and highlight changes needed to align with modern educational requirements. Using quantitative and qualitative methods for data collection and analysis will create a comprehensive understanding of any changes occurring after the completion of these training programs for language teachers.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

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

Panagiotis Barkas: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Validation; Visualization; Writing – original draft.

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

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The Study of EFL Learners' Perception of Using E-learning, Self-Regulation and Constructivism in English Classrooms: Teachers, Intermediate and Advanced Learners' Attitude [1]

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ABSTRACT

Introduction: Effective ways of acquiring a second language in an educational context undergo development in teaching and learning through e-learning, self-regulated learning, and constructivism methods of learning that would be practical and useful for EFL learners.

Purpose: To investigate the impact of self-regulated learning, constructivism, and e-learning on English language learning and the attitudes of learners toward them.

Method: The study employs a quantitative research method involving 360 intermediate and advanced EFL learners and 34 teachers. Data were collected over a six-week period in Zanjan English language institutes using the questionnaires. The one-sample T-test compared the means, while ANOVA assessed significant differences among the variable means of E-learning, self-regulation, and constructivism in the study groups. Post-hoc LSD tests were used to compare the means of groups two by two.

Results: The results showed that the participants displayed positive attitudes toward using e-learning, self-regulation, and constructivism in acquiring a second language. Qualitative data analysis revealed EFL learners' autonomy in learning and the potential influence of teachers in shaping learners' attitudes.

Conclusion: This study highlights the importance of considering learners' attitudes and autonomy in designing effective language learning environments. Understanding the learners' perspectives can aid educators in adopting innovative and learner-centered approaches, leading to enhanced language learning outcomes.

KEYWORDS

Constructivism, EFL learners, E-learning, Self-regulated learning, Teachers

INTRODUCTION

The field of education has witnessed remarkable advancements with the rapid development of information technology (IT). One notable innovation that has emerged in response to these technological advancements is E-learning, a method that utilizes electronic instructional content delivered via the Internet, enabling learners and instructors to participate in remote learning communities (O'Connor et al., 2023; Patrichi et al., 2016). E-learning holds the potential to enhance access to advanced educational experiences, facilitate collaborative learning, and improve the overall quality and effectiveness of education. Its flexibility in terms of time management and learning pace appeals to self-directed and independent learners, accommodating diverse individual needs and preferences (Dubey et al., 2023; Moreira, 2017).

Concurrently, educational researchers and practitioners have recognized the

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significance of self-regulated learning (SRL) as a fundamental aspect of the learning process. Self-regulated learners take an active role in their learning journey, setting goals, identifying resources, and employing appropriate learning strategies to achieve academic success (Cho & Kim, 2013). SRL has been associated with increased motivation, critical thinking, and the ability to transfer skills to real-world contexts, making it a valuable skill for learners across various educational settings, including E-learning environments (Heikkinen et al., 2023; Peeters et al., 2016).

The constructivist approach to teaching and learning has gained prominence as a student-centered paradigm. This approach emphasizes learners' active engagement in the learning process, with teachers adopting the role of facilitators who share knowledge and authority with students. Within constructivist classrooms, learners construct their understanding through meaningful experiences and interactions, promoting deeper comprehension and application of knowledge (Alqahtani et al., 2023; Alt, 2019). Constructivism has demonstrated promising outcomes in fostering students' critical thinking, problem-solving abilities, and autonomy in learning (Gunduz, 2015).

While existing study recognizes the potential of E-learning, SRL, and constructivism as powerful educational tools, it is essential to investigate the perception of EFL (English as a Foreign Language) learners towards these autonomous learning approaches, particularly at intermediate and advanced language proficiency levels. Understanding learners' attitudes and preferences towards these approaches is critical for designing learner-centric and effective language learning environments that cater to their specific needs and motivations (Maphoto & Suliman, 2024).

The primary objective of this study is to examine the perceptions of EFL learners concerning the integration of E-learning, self-regulated learning (SRL), and constructivism in English classrooms, with particular emphasis on intermediate and advanced learners and their teachers. By gaining insights into the perspectives of learners, this research aims to fill the existing gap in the literature and advocate for the adoption of evidence-based, learner-centered strategies that enhance language learning success in EFL contexts. Furthermore, by investigating the interplay among E-learning, SRL, and constructivism, this study intends to contribute to the ongoing discourse on autonomous learning approaches in language education (Fitria, 2024).

A crucial aspect of this research is to understand the perceptions and comprehension of autonomous learning approaches among EFL learners and their teachers. This understanding is essential for developing a more effective and personalized language learning environment, ultimately improving language learning outcomes for intermediate and advanced EFL learners.

Research Questions

(1) Is the EFL learners' perception of using self-regulation in English classrooms desirable?

(2) Is the EFL learners' perception of the advantages and disadvantages of using e-learning in English classrooms desirable?

(3) Is the EFL learners' perception of using constructivism in English classrooms desirable?

(4) Is the EFL learners' and teachers' perception of using self-regulation in English classrooms desirable?

(5) Is the EFL learners' and teachers' perception of using e-learning in English classrooms desirable?

(6) Is the EFL learners' and teachers' perception of using constructivism in English classrooms desirable?

LITERATURE REVIEW

Constructivism

Constructivism is a prominent learning theory that emphasizes active student participation in the learning process, with teachers playing a facilitative role to help students master and achieve the learning objectives. Classroom assessment is utilized to foster effective teaching practices (Bell, 2020; Khaliq et al., 2023). Fernando and Marikar (2017) conducted a research study with a target population of 41 students to explore the application of constructivist learning theory and participatory teaching methods. The students were provided with a questionnaire related to constructivist learning theory and participatory teaching methods. The findings of the survey provided strong support for the effectiveness of constructivist teaching/learning theory and participatory teaching methods in the educational context. The survey revealed that participatory teaching methods, such as 'question and answer' and 'group discussion,' were highly popular among undergraduate students, indicating that students responded positively to these interactive approaches. Furthermore, the study established the utility of these participatory teaching methods in enhancing the overall learning experience for the students (Omodan, 2022; Shah & Kumar, 2019).

Self-Regulation

Self-regulated learning theory refers to the process, a learner involves in when takes responsibility for acquisition in learning. It happens in three steps: planning, monitoring, and reflection. A new algorithm called Inductive Miner (Cerezo et al.,2020; Yossatorn et al., 2023) was applied

in the educational domain over the interaction traces from 101 university students in a course given over one semester on the Moodle 2.0 platform. Data were extracted from the platform's event logs with 21,629 traces in order to discover students' self-regulation models that contribute to improving the instructional process. It concluded that although students who passed did not follow the instructors' suggestions exactly, they did follow the logic of a successful self-regulated learning process as opposed to their failing classmates.

A mixed-methods study was conducted to examine the effects of self-regulated learning (SRL) strategy training on learners' achievement, motivation, and strategy use in a web-enhanced College Success course at a community college in the southeast US. The participants in this study were 21 (8 treatment vs. 13 control) undergraduate students enrolled in 2 sections of the course. The participants were freshmen (N=18) and sophomores (N=3), whose ages ranged from 17 to 24 (M=18.9). Fifteen (71%) of the participants were female and 6 (29%) were male. They were made up of 7 (33%) African Americans, 13 (62%) Caucasians, and 1 (5%) Hispanic. Five (62.5%) participants in the treatment and seven (53.8%) in the control condition were required to take this College Success course because of deficiency on the College Placement Test. Only students who completed all the intervention procedures constituted the participants in this study, and comparisons between the pre-and post-intervention results were made on exactly the same set of individuals. The findings of this study suggested that the training on SRL strategies might be beneficial to learners' persistence (Hu & Discroll, 2013; Li et al., 2022; Hsu et al., 2023).

E-learning

E-learning, or electronic learning, refers to the delivery of learning and training through digital resources and has transformed educational practices. It introduces new opportunities in education (Bai, 2023; Sadapotto et al., 2022) and also presents significant challenges for students, who must determine what, when, how, and for how long to learn (Ampa, 2021; Cerezo et al., 2016). Self-regulated learning (SRL) and constructivism are crucial theoretical frameworks for understanding these dynamics in E-learning environments. Self-regulated learning involves learners taking control of their own learning processes, setting goals, and monitoring their progress. This approach is particularly relevant in E-learning, where students often work independently and must manage their own learning activities. The ability to self-regulate is essential for success in these environments, as highlighted by Aparicio et al. (2017), who proposed a theoretical model examining grit as a determinant of E-learning system success. Their study, which validated the model using structural equation modeling (SEM), demonstrated that grit positively affects student satisfaction and individual performance.

Constructivism, on the other hand, emphasizes the active role of learners in constructing their own understanding and knowledge through experiences and interactions. In the context of E-learning, constructivist approaches can facilitate deeper engagement and understanding by encouraging learners to interact with content, peers, and instructors in meaningful ways. Dashtestani (2014) investigated the perceptions of EFL learners and teachers regarding the use of online instruction, underscoring the role of teachers as mediators who facilitate these interactive and constructive learning processes.

Combining these theoretical perspectives, it is evident that both self-regulation and constructivist principles are integral to maximizing the effectiveness of E-learning. Understanding how these elements interact can inform the development of more effective and personalized learning environments, ultimately enhancing educational outcomes.

Relationship Between Variables

The relationship between constructivism, self-regulated learning, and E-learning is a fundamental aspect of this study, as it sheds light on the interconnectedness and collective impact of these concepts on EFL learners' attitudes and perceptions in intermediate and advanced language proficiency levels. Understanding how these three autonomous learning approaches work together is crucial in creating an effective and learner-centered language learning environment (Heikkinen et al., 2023)

Constructivism, as a learning theory, emphasizes the active role of students in constructing their understanding and knowledge through meaningful experiences and interactions with the learning materials and their peers (Ying, 2016). This student-centered approach promotes critical thinking, problem-solving, and a deeper comprehension of the subject matter. By encouraging students to take responsibility for their learning and explore various perspectives, constructivism fosters a sense of ownership and engagement in the learning process.

Self-regulated learning complements constructivism by empowering students to become active and independent learners (Cho & Kim, 2013). Through SRL, learners are encouraged to set specific learning goals, monitor their progress, and regulate their learning strategies to achieve those goals. When students apply self-regulation techniques within the constructivist learning environment, they are better equipped to adapt their learning strategies to suit their individual needs and learning styles, further enhancing their learning outcomes (Peeters et al., 2016).

Both constructivism and SRL are well-aligned with the principles of E-learning, which leverages electronic instructional content delivered via the Internet to create remote learn-

ing communities (Patrichi et al., 2016). E-learning provides students with the flexibility to manage their learning pace and access educational resources from any location, making it an attractive option for learners seeking personalized and self-directed learning experiences (Moreira, 2017). In E-learning environments, students are encouraged to take an active role in their learning, engage in collaborative online discussions, and participate in interactive learning activities. This aligns with the constructivist notion of student engagement and empowerment.

By exploring the interplay between constructivism, SRL, and E-learning, this study seeks to uncover valuable insights into how these autonomous learning approaches collectively influence EFL learners' attitudes and perceptions in English classrooms. Understanding how these concepts complement and reinforce each other can lead to the design and implementation of more effective instructional strategies that cater to the unique needs and motivations of intermediate and advanced EFL learners. Moreover, it can inform educators and policymakers on how to create dynamic and interactive language learning environments that foster learner autonomy, motivation, and overall language learning excellence (Mejeh et al., 2024).

The potential of constructivism, SRL, and E-learning to create learner-centric language learning environments is particularly significant in the context of language education. By embracing these principles and practices, language educators can empower their students to become more proficient, confident, and self-directed language learners, equipped with the essential skills to continue their language learning journey beyond the classroom (Ampa, 2021). By uncovering the relationship between these autonomous learning approaches, this study aims to contribute to the existing body of knowledge in EFL education and provide practical implications for language educators and policymakers seeking to create empowering and innovative language learning experiences for intermediate and advanced EFL learners.

METHOD

This quantitative study used a descriptive and inferential statistical method, one sample T-test, pre-test and post-test, and parametric test to test the EFL learners' perception of using e-learning, self-regulation, and constructivism in English classrooms. This study collected quantitative and correlational information through questionnaires and a quick placement test to investigate the learners' proficiency level. The participants were selected through a multistage cluster random sampling method. To guarantee the homogeneity of the participants, the Quick Placement test (QPT) was used to test the learners' proficiency level.

Learner Participants

The participants of this study were Iranian EFL learners in intermediate and advanced-level institutions in Zanjan province (n=7000). According to the Cochran formula size, 360 learners were needed as the sample size of the study. Because of the limitation of easy access to institutions, four institutes were chosen as the target of this study between the total institutions (n=116) in Zanjan province. The learners were chosen from Melal Language Institute, Safir Institute, and Omid Language Institute, Goldi's Institute for these stages. We used questionnaires to investigate the e-learning, self-regulation, and constructivism of the learners. The type of sampling in this study was multi-stage random sampling. The participant's age ranges were 13 to 14 and 15 to 16, and they were about 20 learners in each class. We used a multi-stage sampling method for selecting the learners.

Teacher Participants

The other group constituted the teachers who were selected according to the convenience sampling method (n=34). The teachers, both male and female, were from Zanjan institutes. They responded to the questionnaires in self-regulation, e-learning, and constructivism. During one term the data were collected through questionnaires for the learners and the teachers too. A descriptive research method was chosen for this study. A Likert scale was used to investigate this study through questionnaires. It is the most widely used approach to scaling responses in this study.

Instruments

In this study, we used three questionnaires containing 10 items on a 5-point Likert scale to collect the required data. So, the questionnaires included the participants' perceptions of self-regulation, constructivism, and the advantages and disadvantages of using e-learning.

Pilot Study

The participants' perceptions of Self-Regulation and constructivism capabilities, e-learning (ICTs) advantages, and disadvantages sections of questionnaires were piloted on 30 intermediate and advanced students with similar educational backgrounds to obtain the test's reliability. The internal consistency and reliability were acceptable. The test-retest reliability of these tests with the one-week interval was (α =.84) which showed an acceptable reliability value.

Backward and Forward Translation

To ascertain that the participants had no difficulty in understanding all the items in the questionnaires, the ques-

tionnaires were translated into Persian. First, two expert translators were given the English version to translate into Persian, and then two other expert translators were asked to translate the Persian versions of the questionnaires back into English, and these versions were compared by two other English-language experts with the original English questionnaires, and eventually, one of the Persian versions of the most suitable translated questionnaires was chosen as the current study questionnaire.

Procedure

In this study, two levels of students (n=360) in English classrooms in intermediate, and advanced levels (Melal Institute, Iranzamin, Roozbeh & etc,) were chosen, and in each level, self-regulated learning, constructivism, and e-learning were investigated with a questionnaire that contained 10 items, for each one. During one term the data were collected through questionnaires for the learners, and the teachers too. Descriptive and inferential research methods were chosen for this study. A Likert scale was used to investigate this study through questionnaires. It is the most widely used approach to scaling responses in this study.

Data Analysis

In this study, descriptive and inferential statistical methods were used to analyze the collected data and test the research questions. In descriptive methods, the research data were presented via Tables and statistical tools such as central indicators and dispersion to clarify the subject. We also used inferential statistical methods to test hypotheses.

RESULTS

Descriptive Findings

To become more familiar with the nature of research variables, it is necessary to describe them before analyzing the data because statistical description of data precedes statistical inference and helps to identify patterns governing the data. In this section, we used some central indicators and dispersion. Accordingly, the descriptive features of research variables were examined separately for each research question.

Descriptive indices are related to research variables of self-regulation, e-learning, and constructivism in three groups of Teachers, Intermediate learners, and Advanced learners. The results are presented in Table 1. Also, in Figure 1, the means of pre-test and post-test were compared.

Inferential Findings

In this section, the normality of the study samples was initially investigated. Based on the normality of the samples, parametric tests were employed to test the research hypotheses. A T-test was used to compare the sample means with the theoretical mean to determine whether to accept or reject the hypotheses.

The sample sizes in all three groups were sufficiently large, with each exceeding 30 participants. According to the central limit theorem, normality can be assumed for large samples; hence, the hypothesis of normality for the study

Table 1

Descriptive Statistics of E-learning, Self-regulation, and Constructivism

	Group	N	Minimum	Maximum	Mean	Std. Deviation
Self-Regulation	Teachers	34	2.20	4.10	3.3500	.43641
	Intermediate Learners	180	2.70	4.50	3.8822	.50629
	Advanced Learners	180	2.70	4.50	3.9128	.48150
Constructivism	Teachers	34	1.80	5.00	3.5706	.58596
	Intermediate Learners	180	2.70	4.90	4.0406	.64424
	Advanced Learners	180	2.70	4.90	4.0422	.65134
E-learning	Teachers	34	2.50	4.30	3.2706	.47580
	Intermediate Learners	180	1.60	4.60	3.5894	.66058
	Advanced Learners	180	1.60	4.60	3.7011	.59137

Figure 1
The Mean ofGgroups of Study
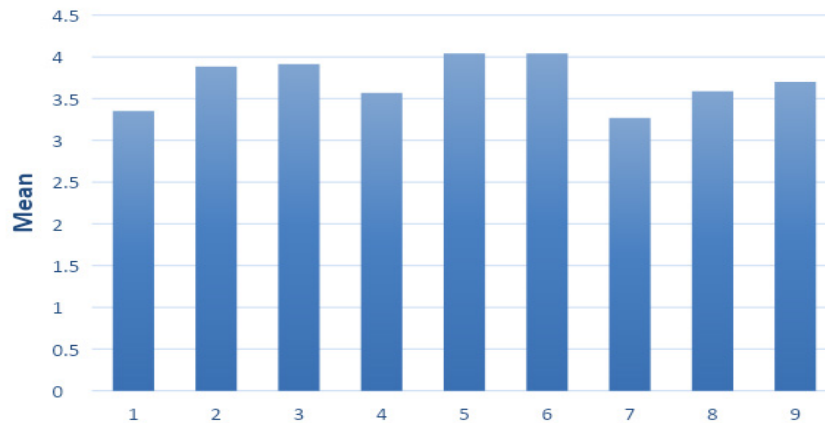
Table 2
One-Sample Test of Self-regulation

Group		Test Value = 3		
t		df	Sig	
Teachers	Self-regulation	4.676	33	.000
Intermediate Learners	Self-regulation	23.378	179	.000
Advanced Learners	Self-regulation	25.433	179	.000

samples was deemed acceptable. Consequently, parametric tests were utilized to test the research hypotheses.

First Hypothesis

The EFL learners' and teachers' perception of using self-regulated learning in English language classrooms is desirable.

A One-Sample T-test was conducted to test this hypothesis. The related hypothesis for the comparison of practical and theoretical means was as follows:

H_0: The mean is less than or equal to 3 (The perception of EFL learners and teachers on using self-regulated learning in English language classrooms is not desirable).

H_1: The mean is greater than 3 (The perception of EFL learners and teachers on using self-regulated learning in English language classrooms is desirable).

Mathematically, this can be expressed as:

H_0: μ≤3
H_1: μ>3

where μ represents the population mean. The results of the One-Sample T-test are presented in Table 2.

As seen in all three groups of the study, a significance level (Sig) of 0.000 was obtained. Therefore, the null hypothesis is rejected at the 0.01 error level. In other words, the mean of the sample is significantly greater than 3. This indicates that EFL learners' and teachers' perception of using self-regulated learning in English classrooms is desirable.

Second Hypothesis

The perception of EFL learners and teachers on the advantages and disadvantages of using e-learning in English classrooms is desirable.

One-Sample Test used to test the above hypothesis. related hypothesis to the comparison of practical and theoretical means showed:

H_0: The mean is less than or equal to 3. EFL learners and teachers' perception on the advantages and disadvantages of using e-learning in English classrooms is not desirable.

H_1: The mean is more than 3. EFL learners and teachers' perception on the advantages and disadvantages of using e-learning in English classrooms are desirable.

Mathematically, this can be expressed as:

H0: μ≤3
H1: μ>3

where μ represents the population mean. The results of the One-Sample T-test are recorded in the Table 3.

In the group of teachers, a significance level (Sig) of 0.002 was obtained, while in the group of language learners, the significance level was 0.000. Therefore, the null hypothesis is rejected at the 0.01 error level. This indicates that the mean for the community is significantly greater than 3. Consequently, the perception of EFL learners and teachers regarding the advantages and disadvantages of using E-learning in English classrooms is positive.

Third Hypothesis

EFL learners' and teachers' perceptions of using constructivist learning are desirable.

A one-sample test was used to test the above hypothesis related to the comparison of practical and theoretical means showed:

H_0: The mean is less than or equal to 3. (EFL learners' and teachers' perceptions of using constructivist learning in English classrooms are not sufficiently positive).

H_1: The mean is greater than 3. (EFL learners' and teachers' perceptions of using constructivist learning in English classrooms are desirable).

$$\begin{cases} H_0: \mu \le 3 \\ H_1: \mu > 3 \end{cases}$$

Where μ is the mean of the population. The results of the One-Sample T-test are recorded in Table 4.

In all three study groups, a significance level (Sig) of 0.000 was obtained. Consequently, the null hypothesis is rejected at the 0.01 error level. This indicates that the population mean is significantly greater than 3. Therefore, EFL learners' and teachers' perceptions of using constructivist learning in English classrooms are favorable.

Fourth Hypothesis

There is a significant difference between the EFL learners of intermediate level, advanced level, and teachers of using self-regulated learning in the English language classes.

H0: The variable mean of Self-regulation in the three groups of study is the same.

H1: There is a significant difference between the variable mean of Self-regulation in the two groups.

To test the hypothesis, the means of three independent populations were compared. Since the samples from all three communities exhibited a normal distribution, a one-way analysis of variance (ANOVA) was employed. Descriptive indicators for the self-regulation variable across the three study groups are detailed in Table 5.

There is a significant difference in the self-regulation means among the three groups.

Considering the value of null hypothesis Sig = 0.000, the hypothesis of equality of the means of the three groups of study, was rejected at the error level of 0.01 and it was concluded that there is a significant difference between the means of at least two of the three groups. The post-hoc LSD test was used to identify the significant difference between groups.

Table 3

One-Sample Test of E-learning

Group		Test Value = 3		
	t		df	Sig
Teachers	E-learning	3.316	33	.002
Intermediate Learners	E-learning	11.972	179	.000
Advanced Learners	E-learning	15.906	179	.000

Table 4

One-Sample Test of Constructivism

Group		Test Value = 3		
	t		df	Sig
Teachers	Constructivism	5.678	33	.000
Intermediate Learners	Constructivism	21.670	179	.000
Advanced Learners	Constructivism	21.468	179	.000

Table 5

Self-Regulation Descriptives

	N	Mean	Std. Deviation
Teachers	34	3.3500	.43641
Intermediate Learners	180	3.8822	.50629
Advanced Learners	180	3.9128	.48150
Total	394	3.8503	.51211

Table 6

Self-Regulation ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.396	2	4.698	19.611	.000
Within Groups	93.669	391	.240		
Total	103.065	393			

Table 7

Multiple Comparisons Dependent Variable: Self-Regulation LSD

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	Result
Teachers	Intermediate Learners	-.53222*	.09153	.000	Significant
	Advanced Learners	-.56278*	.09153	.000	Significant
Intermediate Learners	Teachers	.53222*	.09153	.000	Significant
	Advanced Learners	-.03056	.05159	.554	Not Significant
Advanced Learners	Teachers	.56278*	.09153	.000	Significant
	Intermediate Learners	.03056	.05159	.554	Not Significant

*Note. *The mean difference is significant at the 0.05 level.*

The results of the post-hoc test revealed no significant difference in self-regulation means between the Intermediate Learners and Advanced Learners groups, but there was a significant difference in the self-regulation means in the Teachers group.

Fifth Hypothesis

There is a significant difference between the EFL learners of intermediate level and advanced level, and teachers on the advantages and disadvantages of using e-learning in English classrooms.

H_0: The variable mean of e-learning is the same in the three groups of study.

H_1: There is a significant difference between the variable means of e-learning in the two groups.

To test the above hypothesis, the objective was to compare the means of three independent populations. Given that the samples from all three communities displayed a normal dis-

tribution, a one-way analysis of variance (ANOVA) was utilized. The results of the variance analysis are documented in Table 8, which includes the descriptive indicators of e-learning variables across the three study groups.

There is a significant difference among the variable means of e-learning in the three study groups. The significant differences identified by the variance analysis test are presented in Table 9.

Given the significance level (Sig) of 0.001, the null hypothesis of equal means among the three study groups was rejected at the 0.01 error level. This indicates a significant difference between the means of at least two of the three groups in Table 10. The LSD post-hoc test was subsequently used to identify the specific group differences.

The results of the post-hoc test showed that there was no significant difference between the means of e-learning in two groups of advanced Learners and intermediate Learners, but there is a significant difference between the variable means of the self-regulation in teachers' group.

Sixth Hypothesis

There is a significant difference in the use of constructivist learning between intermediate-level EFL learners, advanced-level EFL learners, and teachers in English classrooms.

H_0: The variable mean of constructivism is the same across the three study groups.

H_1: There is a significant difference between the variable means of constructivism in the two groups.

To test this hypothesis, the objective was to compare the means of three independent populations. Since the samples from all three communities exhibited a normal distribution, a one-way analysis of variance (ANOVA) was used. The descriptive indicators of constructivist learning across the three study groups are detailed in Table 11.

There was a significant difference among the variable means of constructivism in the three study groups. According to Table 12, the significant differences are documented in the results of the variance analysis test.

Given the significance level (Sig) of 0.000, the null hypothesis of equal means among the three study groups was rejected at the 0.01 error level. This indicates a significant difference between the means of at least two groups. The LSD post-hoc test was used to identify these significant differences among the groups. The results of this test are presented in Table 13.

Based on Table 13, the results of the post-hoc test showed that there was no significant difference between the means of constructivism in the advanced learners and intermediate learners' groups. However, there was a significant difference between the variable means of constructivism in the teachers' group.

DISCUSSION

The research questions put forward sought to assess the perception of EFL learners and teachers of using e-learning, SRL, and constructivism in English classrooms. Quantitative findings revealed that the intermediate and advanced EFL learners were highly positive with autonomous learning methods. Also, the teachers might be controlled by the

Table 8

E-learning Descriptives

	N	Mean	Std. Deviation
Teachers	34	3.2706	.47580
Intermediate Learners	180	3.5894	.66058
Advanced Learners	180	3.7011	.59137
Total	394	3.6129	.62530

Table 9

E-learning ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.484	2	2.742	7.235	.001
Within Groups	148.180	391	.379		
Total	153.664	393			

Table 10

Multiple Comparisons Dependent Variable: E-learning LSD

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	Result
Teachers	Intermediate Learners	-.31886*	.11512	.006	Significant
	Advanced Learners	-.43052*	.11512	.000	Significant
Intermediate Learners	Teachers	.31886*	.11512	.006	Significant
	Advanced Learners	-.11167	.06489	.086	Not Significant
Advanced Learners	Teachers	.43052*	.11512	.000	Significant
	Intermediate Learners	.11167	.06489	.086	Not Significant

*Note. *The mean difference is significant at the 0.05 level.*

learning process. Furthermore, the mindset among participants perceived positive attitudes through using e-learning, SRL, and constructivism. Our investigation on e-learning is motivated by the study conducted by Dashtestani (2014). Motivational beliefs of student who use SRL strategies facilitate their online English learning (Crezo, 2020). Fernando and Marikar (2017) investigated constructivist classrooms that emphasize critical thinking and problem-solving skills, which resonate with those who acknowledge the importance of such cognitive abilities for language proficiency. Despite the barriers and challenges of students and teachers in e-learning, SRL, and constructivism, our study adds other groups of participants for comparison in these three factors. Therefore, this study provided a positive attitude and motivation toward using e-learning, SRL, and constructivism for EFL learners and teachers.

The impact on the perception of the SRL method in this study showed the learners' motivation and perception in the learning process empowering them to actively participate in achieving their learning objectives; the results of qualitative data indicated the compatibility of SRL with previous research results (Crezo et al., 2020). Also, the adaptability and flexibility inherent in self-regulation enable learners to adjust their strategies to different language contexts, promoting language proficiency. The development of self-regulation skills, including time management and self-assessment, aligns with the broader educational goal of equipping learners with skills that extend beyond the classroom. Moreover, our findings on teachers' and EFL learners' attitudes and motivation on using SRL theory confirmed the findings of Yossatorn (2023) and Hu and Discroll (2013) that learners' persistence often positively exhibits heightened motivation and engagement and so, active participation in setting goals and tracking progress leads to a sense of achievement, fostering effective learning outcomes. However, challenges must be considered. Cultural norms can influence learners' perception of self-regulation, especially in contexts where teacher-centered approaches are customary (Li et al., 2022). Surprisingly, this discussion examines the potential advan-

Table 11

Constructivism Descriptives

	N	Mean	Std. Deviation
Teachers	34	3.5706	.58596
Intermediate Learners	180	4.0406	.64424
Advanced Learners	180	4.0422	.65134
Total	394	4.0008	.65469

Table 12

Constructivism ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.886	2	3.443	8.333	.000
Within Groups	161.564	391	.413		
Total	168.450	393			

Table 13

Multiple Comparisons Dependent Variable: Constructivism LSD

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	Result
Teachers	Intermediate Learners	-.46997*	.12020	.000	Significant
	Advanced Learners	-.47163*	.12020	.000	Significant
Intermediate Learners	Teachers	.46997*	.12020	.000	Significant
	Advanced Learners	-.00167	.06776	.980	Not Significant
Advanced Learners	Teachers	.47163*	.12020	.000	Significant
	Intermediate Learners	.00167	.06776	.980	Not Significant

*Note. *The mean difference is significant at the 0.05 level.*

tages and challenges associated with both learners' and teachers' viewpoints on incorporating self-regulation into the EFL context. Accordingly, our study considered (Hsu et al., 2023) that supported learners monitor and evaluate their learning process through SRL with greater development and lower learning anxiety. Therefore, our study revealed that teachers can play a pivotal role in helping learners identify effective study methods and enable learners to tailor their learning strategies to suit their unique strengths and needs. In conclusion, the desirability of EFL learners and teachers' perception of using self-regulation in English classrooms revolves around empowerment, individualized learning, lifelong skill development, and motivation.

This study explored EFL learners' perceptions of the advantages and disadvantages of e-learning in English classrooms which brought to light essential considerations in modern education. The discussion revolves around the desirability of these perceptions, considering both potential benefits and challenges related to e-learning. It should be noted that the studies of Dashtestani (2014) and Bai (2023) investigated EFL learners' and teachers' perceptions of the use of online instructions and the teachers known as the mediators. Therefore, our study confirmed by those researches that the learners can engage with learning materials at their convenience, tailoring their study schedules to individual preferences. Additionally, Crezo (2016) and Ampa (2021) investigated adaptive technologies often embedded in e-learning platforms to personalize learning journeys, catering to individual performance levels and preferences. On the other hand, the findings of Sadapotto (2022) showed that both teachers and learners responded to e-learning limitations by their anxiety about online learning and the limited competence of teachers in the use of learning applications, limited resources, and definitely learners' lack of focus into learning and other network problems. Therefore, these findings contradicted our findings of using e-learning. Surprisingly, Apricio, Bacao, and Oliveira (2017) maintained self-discipline and motivation without direct teacher and peer presence which can be demanding, potentially impacting learning progress with satisfactory individual learning performance. According to previous studies, our study has most in common with online learning methods. When EFL learners and teachers hold positive perceptions of e-learning they can leverage digital platforms to deliver content in innovative ways through multimedia content, online dictionaries, language learning apps, and interactive materials to enhance the learning experience. In conclusion, the desirability of EFL learners' and teachers' perception of using e-learning in English classrooms was comprehensive with the potential advantages of e-learning, ensuring effective and enriched learning for both learners and teachers.

Our investigation on EFL learners and teachers' perception of using constructivism was motivated and confirmed by the study conducted by Fernando and Marikar (2017), who investigated the constructivist teaching and learning theory on undergraduate students that supported a high level of popularity of using this method. Furthermore, they found that constructivism incorporated constructive teaching and learning methods for teachers and educators to create a dynamic and interactive learning environment, and this does not mean that the same paper does not value the traditional methods of teaching and learning. A few years later, Shah and Kumar (2019) investigated effective constructivist teaching and learning in the classroom empowering learners to take charge of their learning, fostering autonomy and self-directed learning. Not all EFL learners may respond equally well to constructivist methods. Individual preferences for more structured, teacher-guided approaches can impact perceptions of constructivism's desirability. Effective constructivist teaching involves guiding learners through student-centered learning, requiring proper training for teachers to facilitate such experiences. The results of the same study showed that constructivism should be used correctly to reach a useful goal and is in line with the findings of our study. Surprisingly, the studies of Bell (2020) and Omodan (2022) achieved positive viewpoints with our study on constructivism's benefits, including active learning, real-world relevance, critical thinking, and autonomy, that must be weighed against challenges linked to learning preferences, time constraints, teacher roles, and cultural contexts. In addition, the desirability of EFL learners and teachers' perception of constructivism can promote classroom productivity in different contexts. Accordingly, the results of our study on constructivist learning theory on the EFL learners were commensurate with the results of Khaliq (2023). In conclusion, by finding common ground and adapting constructivist principles to meet diverse needs, educators can maximize the potential advantages of constructivist approaches, ensuring an enriching and effective language learning experience for both learners and teachers.

The limitation of the study is due to time constraints, where the participants received questionnaires, and the difficulty of generalizability to other levels of EFL learners and teachers in another context. These shortcomings can be the subject of future studies, and where possible, new computer software can practically be used to achieve a better goal. Undoubtedly, all these effects lead to innovation in teaching and autonomous learning.

CONCLUSION

This study explored the perceptions of EFL learners regarding the integration of E-learning, self-regulated learning (SRL), and constructivism in English classrooms, specifically focusing on intermediate and advanced proficiency levels within the Iranian EFL context. By examining the interplay between these three autonomous learning approaches, we

aimed to gain valuable insights into how they collectively influence EFL learners' attitudes and perceptions.

While the findings provide significant insights, their generalizability to other contexts may be limited. It would be beneficial to replicate this study with students majoring in different fields to verify its applicability both within and outside the country. Furthermore, future research could examine the performance of EFL or ESL learners and teachers across various teaching methods, including group discussions and question-answer sessions. Participatory teaching methods such as 'question and answer' and 'group discussion' were particularly popular among the participants.

In conclusion, this study underscores the potential of integrating constructivism, self-regulated learning, and E-learning in the English language classrooms to enhance learners' attitudes and perceptions. The results suggest that these approaches can significantly contribute to creating a more effective and engaging learning environment.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

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

Siros Izadpanah: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Validation; Visualization; Writing – original draft.

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"Expunge Virtually All Use of the Passive Voice": How Does Style Guideline Affect Passive Voice Occurrences in Research Articles?

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ABSTRACT

Background: The prevalence and impact of passive voice (PV) structures in research articles have garnered attention, particularly within the context of academic publishing guidelines. Some journals' writing style guideline, for example, explicitly advises authors to eliminate passive voice instances from their manuscripts, prompting an examination of the extent to which this guideline influences authors' choices in different journal contexts.

Purpose: This study aimed at comparing the frequency of passive voice (PV) structures used in research articles published by journals originating in Indonesia (henceforth, JOI) to those in research articles published by journals originating in English-speaking countries (henceforth, JOE).

Method: Data were gathered from respected journals in Indonesia and the United Kingdom, both renowned for their excellence in language education and applied linguistics. After reviewing relevant literature and considering journal origins and author affiliations, we selected 34 articles (17 from each group) out of 66. We focused our analysis on the 'Introduction' and 'Method' sections, as these sections typically contain active voice in the former and passive voice in the latter. Other sections and peripheral elements were excluded. The analysis involved exporting PDFs to text files to count words and passive voice occurrences. We utilized a passive voice detector tool and manual analysis for accuracy. A t-test was conducted to compare the frequency of passive voice between the two journals.

Results: The results indicated three main findings with respect to the research questions: 1) PVs in JOI occurred more frequently in the 'Method' than in the 'Introduction' section, 2) similarly, PVs in JOE occurred more frequently in the 'Method' than in the 'Introduction' section, 3) JOI comprised fewer sentences than JOE but the frequency of PVs in JOI was significantly higher than that in JOE.

Conclusion: We inferred that the current guidelines seemingly affected the authors' choices of using PV. We also provided some suggestions on how to use AV and PV appropriately in the manuscript.

KEYWORDS

Passive Voice, Active Voice, Academic Writing, Research Article

INTRODUCTION

In most universities in Indonesia, producing an academic writing, such as a research report, and publishing it in English-medium international journals have become one of requirements for most of postgraduate students to obtain their degree (Hanami et al., 2023; Ratnawati et al., 2018). Also, this mandatory requirement is true for universities in some countries (Barbero, 2008; Hill & Thabet, 2021; Moradi, 2019). This academic compulsion occasionally poses much pressure on Indonesian students, as indicated by Lemana and Ariffin (2020) suggesting that the participants faced challenges from cognitive, linguistic, psychological, and external factors. In linguistic aspect, for example, Purwanto et al (2020) found

that Indonesian students hardly publish their work, especially in reputable international journals, due to their inadequate English grammar competence in fulfilling the journal guidelines. In addition to content, format, and ethical issues, linguistic considerations are given substantial emphasis in evaluating a manuscript's quality (Martin et al., 2014). One of these linguistic concerns deals with the use of active (AV) and passive voice (VP) (Leong, 2014). Although some journals also inform suggestions on how to use those voices appropriately for academic writing (Millar et al., 2013; Minton, 2015), the conundrum of satisfying the linguistic requirement still prevails among authors.

The rate of using PV in scientific writing has decreased over the last few years (Banks, 2017; Leong, 2020), while AV has gained more popularity in English academic style manuals because it is presumed to elevate sentence clarity and conciseness (Bannet, 2009). For instance, Elsevier requires writers to use AV in their papers, as explicated in the following excerpt of the writing style guideline:

Expunge virtually all use of the passive voice. Use of the passive voice confuses readers because it does not tell the reader "who" did the action.

In addition, several journals often provide style guidelines as to how authors should use grammatical voices in their manuscripts (e.g., Leong, 2014; Millar et al., 2013). Given the compulsion in such linguistic properties to improve publication opportunity, authors should be mindful of their use of PV throughout their manuscript although not all journal publishers request the same requirements (Millar et al., 2013).

The guideline regarding the use of AV and PV is more likely to be affected by the country from which a particular journal originates (e.g., Izunza, 2020; Ruperez & Martín-Pintado, 2003). When comparing PV occurrences in research articles written by Spanish and American authors, Ruperez and Martín-Pintado (2003) found that American authors use more AV than their Spanish counterparts. Furthermore, Izunza (2020) highlighted a significant decline in the use of passive voice (PV) in JOEs, advocating strongly for active voice (AV), in which manuscripts submitted to JOEs commonly undergo the conversion of PV to AV. This preference extends to research articles submitted to journals from North American and Western European regions, as well as those from countries where English is a second language. However, the frequency of both voices in diverse scientific disciplines has not been clearly established.

This issue has encouraged several researchers to investigate AV and PV practices in research articles. For instance, Leong (2014) analyzed 60 science articles from two groups of journals (Group A had specific statements to encourage authors to use AV, while Group B did not include such statements on their websites). The overall result revealed that

Group A had a lower proportion of PV clauses than Group B (26.02% vs. 34.09%). Similarly, Millar et al (2013) indicated that the journal guidelines for expunging PV in manuscripts significantly reduced the use of PV and it highly appeared in the 'Methods' and 'Results' sections.

In Indonesia, majority of studies examining the use of active voice (AV) and passive voice (PV) in academic writing have typically focused on analyzing students' proficiency and challenges with either or both voices (e.g., Manurung et al., 2020; Princess et al., 2018; Simanjuntak, 2019). PV occurrences in students' writing seem to have been underexplored. However, Yannuar (2014) and Subagio (2019) took a different approach compared to the aforementioned studies. Their focus was on analyzing the occurrences of active voice (AV) and passive voice (PV) frequencies in research articles for instance, Yannuar et al. (2014) analyzed the frequent verbs used in 124 Indonesian undergraduate theses and found that AV appeared more frequently than PV. Similarly, Subagio et al. (2019), who investigated the 'Method' section of Graduate EFL students' theses of Universitas Negeri Malang from two periods (1985-2000 and 2002-2015), revealed that AV sentences appeared more frequently in those research reports than PV.

In brief, to the best of our investigation, we hardly found a publication comparing research articles in the Indonesian context with those in English-speaking countries (JOE) context to see how these journals differ in the use of PV. The results of this study are geared to make Indonesian authors aware of the JOE's requirements so that they could successfully publish their research articles in targeted international reputable journals. Therefore, the research questions that emanated from this current study was three-fold:

1. What is the frequency of passive voice in research articles published by journals originating in Indonesia (JOI)?
2. What is the frequency of passive voice in research articles published by journals originating in an English-speaking country (JOE)?
3. Is the frequency of passive voice occurrences in research articles of JOI different from those of JOE?

LITERATURE REVIEW

Passive Voice in Academic Writing

Academic writings (e.g., research reports or articles) prompt more rigid requirements for authors than non-academic writings, such as newspapers, novels, letters, etc. Taking into account the growing acceptance of AV and the lower rate of PV in academic writing over the last few years (Banks, 2017), we presumed two main reasons why AV is probably preferable to PV. The first concern relates to the authorial voice that affects PV occurrence in each section of a research article.

The second one deals with the clarity and conciseness issues that PV brings into a manuscript.

Passive Voice and Authorial Voice

The use of PV is commonly associated with authors' stances embedded in the manuscripts. Authors frequently use PV to indicate an objective and formal tone in their research papers (Baratta, 2009; Chan & Maglio, 2020; Hyland & Jiang, 2017; Rundblad, 2007). Besides, contributing to an objective and formal tone, PV contributes to the authors' opinions and evaluation of a manuscript. In other words, the avoidance of using first-person references, such as «I», «we», «my», and «our», aims to prevent subjectivity (Banks, 2021; Swan, 1995). However, showing confident judgment in academic writing is necessary to show the authors' credible critical thinking, authority, and ownership on the content. The use of "I" and "we" is one of the ways to depict the authors' identities that can manifest themselves in the readers' consciousness (Hyland, 2002). Yannuar (2014) mentioned that projecting the authors' stance through first-person references («I», «we», «my», and «our») in a text is related to AV construction. This seems to be the reason for some journals to encourage the authors to use more AV than PV.

In addition, Siegel (2009) argued that using PV could weaken a scholarly argument. To investigate how the use of PV could reveal the authors' stance, Baratta (2009) analyzed essays written by three undergraduate students through close contextual analysis. The result indicated that the authors implicitly showed their voice and argument within their essay by employing PV. He then asked the students to complete a questionnaire and interviewed them to gain more information about their attitudes toward their preference in using more PV instead of AV. Eventually, the study uncovered that the students attempted to hide their authority on their idea through PV construction.

Passive Voice in Language Typology and Culture

Li and Thompson (1976), employing the topological theory classified language into subject-prominent and topic-prominent languages. Subject-prominent language is defined as a language where the structure of sentences underscores the subject-predicate grammatical relation. In contrast, topic-prominent language is characterized by topic-comment grammatical relations, which assume a paramount role in shaping its basic sentence structure. Despite the multifaceted nature of the term topic in topic-prominent languages, encompassing syntactically, semantically and pragmatic dimensions (Paul & Whitman, 2017), active voice aligns with subject-prominent language, while passive voice is linked to topic-prominent language. This correlation stems from the process of passivation whereby the transformation involves repositioning an object as the subject, subsequently designing it as the topic of the sentence.

Concerning the authors' culture included in this study, Li and Thompson (1976) considered Indo-European language as a subject-prominent language and East Asian language as a topic-prominent language. Mastering an effective writing style to navigate between these two strands of linguistic features seems to be particularly complex for Indonesian scholars. Basthomi (2006) asserted that Indonesian students do not struggle in mastering some English language features such as phonology, morphology, and syntax, yet they hardly attain cultural properties including rhetorical conventions. He further states that Indonesian authors tend to bring their L1 rhetoric indirectness when they write in English. By implication, their argument is presumed to be weak as they hide their identity behind the use of the third person's point of view in their academic writing. This is closely related to PV construction, which employs third-person references that might hinder their power of argument in the text.

Passive Voice in Different Sections of a Research Article

Considering the impact of AV and PV on authorial voice within a text, for example, guidelines provided by Elsevier, as outlined in their Author Services, suggest that authors should strategically employ these voices in distinct sections of a manuscript. In this case, the rationale behind the use of AV and PV does not simply aid in explaining what we want to emphasize in a sentence but to ensure compliance of the journal's requirement (Azar, 2002; Tarone et al, 1981) that might increase publication opportunity in the journals.

PV is used to emphasize the person or thing being acted on (Jutel, 2007), which is more important to be highlighted than the person who performs the action. Therefore, Horbowicz et al. (2019) suggested that authors should use PV more frequently in the 'Methods' section than in the other sections of a research article because the action, procedure, instruments, or design applied in the research are more important than the author (Ding, 2002; Johnson-Laird, 1968; Sword, 2012; Tarone et al, 1998). Ahmad (2012) analyzed the frequency of PV in some scientific research articles (Medical and Natural Science) and found that the authors mostly employed PV in the 'Method' section to show impersonal findings. However, PV may also occur in the 'Result' section to show the objectivity of the result (Dastjerdi et al. 2021).

Passive Voice and the Issue of Conciseness and Clarity

The construction of PV has also been classified in many different ways. For example, Wang (2010) divided PV into three subcategories based on Quirk et al's (1972) view, as displayed in Table 1.

Passive voice sentences (PV) are often longer than their active voice (AV) counterparts. This is because they involve the use of the verb «be» before the past participle and the preposition «by» after it to introduce the actor, as demonstrated in example (1) in Table 1. This characteristic makes PV less

Table 1

Quirk et al's (1972) Passive Voice Form

Types	Example	Description
Type 1: Central passive and true passive (1) With agentive phrase (2) Without agentive phrase or agentless passive	(1) Each essay was scored by two trained raters (2) Adolescent writers are expected to know vocabulary effectively	Agent represents the person or a thing that performs the action. In (1): it is important to know that the *two trained raters* (as the agent) who performs the action. In (2): The writers are expected (by someone). It is not important to know who expects the writers to know vocabulary effectively.
Type 2: (3) Semi passive or mixed passive	(3) We are interested in the types of mediation provided by the researchers.	*Semi passive* is a type of passive that has an active equivalent and the past participle behaves, to a greater or lesser extent like an adjective. In (3): *We are interested* in the types of mediation *by something*. Thus, the researchers are described as "*interested researchers*".
Type 3: Pseudo passive (4) With current copula verbs, e.g., *feel, look, seem, etc.* (5) With resulting copula verbs, e.g., get*, become, grow*	(4) The problem *seems complicated* (5) I came to you late at night because I got frightened	Pseudo-passive is a verb construction that has a passive form but either an active meaning or rather a resultant state. In (4): it is the current situation that the *problem is complicated* In (5): *I got frightened* means that "*my fear*" is as a result of something or something was frightening me.

concise compared to AV. However, in instances where the actor is omitted, such as in a short passive (example 2), a semi-passive (example 3), and a pseudo-passive (example 4), PVs are not longer than their AV equivalents. Minton (2015) discovered that long PVs is outnumbered by short PVs in academic and journalistic writing when he investigated Longman Spoken and Written English (LSWE) corpus. In summary, it is still equivocal to claim that PV generally leads to longer sentence structure.

The clarity issue in PV may occur since the doer of an action is not mentioned in the sentence as in example (2) Table 1. Siegel (2009) prompted authors to use more AV to strengthen arguments by presenting clarity in a research article. However, we sometimes want to highlight the action or the object since to the reader, knowing the doer is not important, as he or she can be implied based on the context. It indicates that using PV and AV deals with the purpose of what we want to emphasize in a sentence (Azar, 2002). Therefore, we argue that the repeated use of both PV and AV can potentially make the text wordier and more difficult to understand, especially when used in long sentences. Hence, to achieve clarity does not necessarily require expunging PV, but avoiding too many repetitions of PV in a sentence.

METHOD

Corpus Selection

The present study employed two primary criteria for the selection of research articles, namely, the journals country of origin and the authors affiliation. In relation to the country criterion, the journals were categorized into two groups. Group A comprised two distinguished journals originating in Indonesia as a non-English speaking country. Notably, JOI did not provide explicit statements regarding the use of AV

and PV. The chosen journals were considered reputable attaining national accreditation as «Rank 1» and international indexing as «Rank 2»in Scopus, signifying their preeminent standing among EFL journals originating from Indonesia during the period of this study.

The reputation was based on the evaluation conducted by the Scholarly Journal Accreditation Team in Indonesia, which categorized scholarly journals into six groups (Putera et al., 2021; Lukman et al., 2018): rank 1 (score 85-100 or indexed in Scopus), rank 2 (score 70-85), rank 3 (score 60-70), rank 4 (score 50-60), rank 5 (score 40-50), and rank 6 (score 30-40). Top of Form Group B consisted of two journals sourced from Elsevier that originated from the United Kingdom, classified as English-speaking countries (JOE). Notably, this journal explicitly endorsed the frequent use of AV in their articles.

The second criterion hinged on the author's affiliation. In Group A, the articles were authored by individuals connected with Indonesian universities, whereas in Group B, authors were linked to universities in countries where English serves as the first spoken language. It is noteworthy that the selected journals shared a common scholarly domain, (ie. English language studies) ranging from English language teaching to applied linguistics.

By employing the aforementioned criteria, we eventually obtained 34 out of 66 articles (17 articles from each group) which were the most currently published articles at the time of data collection. Table 2 shows the summary of journals and articles included in this study.

Corpus Analysis

The corpus analysis focused on the 'Introduction' and the 'Method' sections in which AVs were predominantly found in the introduction, while PVs are prevalent in the method (Mil-

lar et al., 2013). Hence, we excluded the abstract, findings, discussion, and conclusion section from the analysis. Additionally, peripheral segments, such as titles, headings, captions, footnotes, tables, and appendices, were also omitted.

The analysis was carried out in two ways after exporting the .pdf into .txt files to calculate the number of words and PV in each article. Initially, we utilized a Passive Voice Detector available on datayze.com, which highlighted PV sentences through predictors such as S + to be + past participle (by) as

in sentences 1-7 (see Table 3) and summed them automatically. We then undertook a careful reading to analyze PV clauses since the software could not identify other PV forms as observed in sentences 8-13 (see Table 3). Moreover, a human rater can perform a more accurate analysis than a non-human rater (Maamuujav, 2021). To mitigate potential fatigue-induced decision-making biases, we restricted the review of articles to a maximum of five at a time, a practice well below the threshold recommended by Mahshanian and Shahnazari (2020).

Table 2

Summary of Journals and Articles

Group	Journals	Article Volume	Code	Total Articles	Selected Articles
A	Teaching English as a Foreign Language in Indonesia (TEFLIN Journal)	Vol 32, No 1 (2021)	JOI-1	8	4
	Indonesian Journal of Applied Linguistics (IJAL)	Vol 11, No 1 (2021)	JOI-2	24	13
B	Journal of Second Language Writing (JoSLW)	Vol 53 (2021)	JOE-1	8	3
		Vol 52 (2021)		9	5
	Assessing Writing (AW)	Vol 49 (2021)	JOE-2	8	5
		Vol 48 (2021)		9	4
TOTAL				66	34

Table 3

Passive Voice Sentences

Sentences	Passive Forms	Example
Simple sentence	Basic *(be + Ven)*	(1) Academic language is defined as. . .
	Progressive *(be + being + Ven)*	(2) The assessment information is being gathered…
	Perfective *(have + been + Ven)*	(3) Two types of dynamic assessment have been employed in previous research.
	Modal *(modal + be + Ven)*	(4) This cultural knowledge can be consciously used by children
	Modal perfective *(modal + have + been + Ven)*	(5) the above-mentioned studies' findings might have not yet been associated with the context. . .
	To-infinitive (to + be + Ven)	(6) Next, the knowledge and skills of teachers and headmasters need to be enhanced for further GLS implementation success
	Non-finite –ing *(being + Ven)*	(7) . . . long, straight and stout, being caudally directed with no significant dorsal projection.
	Bare *(Ven)*	(8) . . . with the lowest prices accepted by sellers in actually concluded trades.
	Pseudo-passives	(9) The problem *seems complicated*
Complex sentence	Relative clause	(10) . . . which is logically related to avoidance of writing. . .
	Adverbial clause	(11) When failure is anticipated, a threat appraisal serves as a risk to self-worth and leads to lower engagement. . .
	Reported clause	(12) Evidence suggests that students who are motivated are likely to produce better outcomes. . .
	Nominalized clause	(13) A limitation of the present study is + that the data were collected from a single source. . .

To simplify our analysis in computing the percentage of PV with the number of words in each article, we only counted the verbs from two forms of PV in the articles: simple sentences and complex sentences. For instance:

> **Excerpt 3:** When a set of language operations has been **acquired** in L1, they should also be available within L2 contexts. (JOI-113)

> **Excerpt 4**: The issues such as the skyrocketing tuition fee, cheating, bribery, and corruption are **depicted** satirically and **consumed** comically by a large global popular culture's audience. (JOI-102)

> **Excerpt 5**: Deductive coding was **used** since specific questions were **designed** to elicit students' metacognition surrounding the office memo in accordance with the model. (JOE-203)

From the three excerpts above, we considered the word *acquired* in excerpt 3 as one PV. Similarly, although excerpt 4 contained two verbs *depicted* and *consumed* in the sentence, we also considered them as one PV because it was a simple sentence with *the issues* as the subject. Meanwhile, in excerpt 5, we considered the words *used* and *designed* as two PVs because it was a complex sentence where *deductive coding* became the subject in the main sentence and *specific questions* was the other subject in the clause.

Statistical Analysis

We used SPSS Statistics version 23 to conduct a t-test with a 0.05 confidence interval, aiming to assess the variance in the average frequency of PVs between JOI and JOE. Prior to the analysis, the percentage of PV occurrence was calculated in relation to the total number of sentences in the 'Introduction' and 'Method' sections, using the formula below:

$$\text{PVs percentage} = \frac{Total\ PV}{Total\ Sentences}\ x\ 100$$

RESULTS

In this section, we organized and discussed the results to directly address the three research questions guiding our study, presented as follows:

The Frequency of Passive Voice in Research Articles Published by JOI

Table 4 shows that the mean of PVs in the 'Introduction' (M = 27.65) was higher than that in the 'Method' (M = 20.06) section. However, when we counted the percentage of PVs with

Table 4

Frequency of Passive Voice in Journals Originated in Indonesia (JOI)

No	Article Code	Total PVs		Total Sentences		Percentage of PVs	
		Intro	Method	Intro	Method	Intro (%)	Method (%)
1	JOI-101	18	12	48	29	37.50	41.38
2	JOI-102	27	14	65	36	41.54	38.89
3	JOI-103	15	24	57	45	26.32	53.33
4	JOI-104	42	15	113	24	37.17	62.50
5	JOI-201	57	22	86	40	66.28	55.00
6	JOI-202	23	13	37	46	62.16	28.26
7	JOI-203	16	46	33	55	48.48	83.64
8	JOI-204	16	31	54	69	29.63	44.93
9	JOI-205	38	23	90	31	42.22	74.19
10	JOI-206	20	17	45	21	44.44	80.95
11	JOI-207	42	16	79	32	53.16	50.00
12	JOI-208	19	8	64	25	29.69	32.00
13	JOI-209	17	41	37	53	45.95	77.36
14	JOI-210	64	9	115	9	55.65	88.89
15	JOI-211	16	22	53	35	30.19	62.86
16	JOI-212	14	17	34	33	41.18	51.52
17	JOI-213	26	12	58	20	44.83	60.00
	MEAN	27.65	20.06	62.82	35.47	43.32	57.98

the total number of sentences in each section, we found that the mean in 'Introduction' (M = 43.32%) became lower than that in the 'Method' (M = 57.98%) section. This alteration was influenced by the number of sentences in both the 'Introduction' and the 'Method' sections.

Frequency of Passive Voice in Research Articles Published by JOE

In contrast to the frequency of passive voices (PVs) in JOI, Table 5 illustrates a consistent pattern in the frequency of PVs in JOE. The 'Introduction' section exhibited a lower total number of PVs and a lower percentage of PVs (M = 34.06%) compared to the 'Method' section (M = 46.92%), despite the 'Method' section having a lower total number of sentences than the 'Introduction' section.

Comparison between the Frequency of PVs in Research Articles Published by JOI and JOE

Table 6 shows that the mean frequency of overall PVs in JOI (M = 50.65%) surpassed than that in JOE (M = 40.49%). Furthermore, the findings highlight that PVs occurred more frequently in the 'Method' section (M = 52.45%) compared to the 'Introduction' (M = 38.69%) section across all journals.

We undertook a further investigation by calculating the t-test to see if the mean difference between the frequency of PVs in JOI and JOE reported in the descriptive statistics was significantly different. Table 7 shows a significant difference between the frequencies of PVs in the 'Introduction' section $t(2.037) = 2.296$, $p = 0.28$ while PVs in the 'Method' section of both journals were the same, $t(2.037) = 1.813$, $p = 0.79$.

DISCUSSION

Our findings align with those reported by Millar et al. (2013), showing a clear tendency for the use of active voice (AV) in the 'Introduction' and passive voice (PV) in the 'Method' sections of research articles. This pattern indicates a calculated choice by authors to use AV for a forceful presentation of research premises and the significance of their work, thereby emphasizing their contributions. On the other hand, the use of PV in describing methods points to a deliberate focus on the technical aspects of the research rather than the researchers' roles, reflecting a common academic practice that prioritizes methodological detail over personal attribution. This nuanced use of AV and PV aligns with recommendations from leading publishers, such as Elsevier, who suggest that authors carefully consider voice to effectively convey their message while adhering to journal style guides.

Table 5

Frequency of Passive Voice in Journals Originated in English Country (JOE)

No	Article Code	Total PVs		Total Sentences		Percentage of PVs	
		Intro	Method	Intro	Methods	Intro (%)	Method (%)
1	JOE-101	57	46	146	66	39.04	68.18
2	JOE-102	28	8	69	54	40.58	14.81
3	JOE-103	41	12	169	31	24.26	38.71
4	JOE-104	56	20	89	43	62.92	46.51
5	JOE-105	16	27	102	61	15.69	44.26
6	JOE-106	27	78	70	93	38.57	83.87
7	JOE-107	21	22	48	47	43.75	46.81
8	JOE-108	30	16	100	49	30.00	32.65
9	JOE-109	40	57	99	93	40.40	61.29
10	JOE-201	35	35	130	80	26.92	43.75
11	JOE-202	21	30	93	68	22.58	44.12
12	JOE-203	24	37	60	75	40.00	49.33
13	JOE-204	28	22	124	77	22.58	28.57
14	JOE-205	43	34	123	76	34.96	44.74
15	JOE-206	23	34	46	99	50.00	34.34
16	JOE-207	21	29	88	74	23.86	39.19
17	JOE-208	19	75	83	98	22.89	76.53
	MEAN	31.18	34.18	96.41	69.65	34.06	46.92

Table 6

Descriptive Statistics of PVs Frequency in the Introduction and the Method

Section	Journal	Mean (%)	SD	N
Introduction	JOI	43.32	11.41	17
	JOE	34.06	12.09	17
	Total	38.69	12.42	34
Method	JOI	57.98	18.26	17
	JOE	46.92	17.31	17
	Total	52.45	18.40	34
Total	JOI	50.65	16.76	34
	JOE	40.49	16.05	34
	Total	45.57	17.05	68

Table 7

Independent Sample t-Test of Frequency of PVs in JOI and JOE

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Introduction	.220	.642	2.296	32	.028	9.26	4.03
Method	.479	.494	1.813	32	.079	11.06	6.10

This approach, as discussed by Azar (2002) and Tarone et al. (1981), is crucial for ensuring that a manuscript meets editorial standards and enhances its chance of acceptance.

The lower frequency of PVs observed in the Journal of English (JOE) compared to the Journal of Inquiry (JOI), is a significant finding that sheds light on the impact of journal guidelines on authors' language choices. This indicates that authors are more inclined to adhere to the recommended stylistic preferences outlined by journals, such as the encouragement to use AV over PV, as evidenced by prior research conducted by Leong (2014) and Millar et al. (2013). The result of this study suggest that journals explicitly endorsing AV usage may influence authors to minimize the use of PVs in their manuscripts, potentially due to a desire to align with editorial expectations and increase their chances of publication. This underscores the importance of authors being aware of and responsive to journal guidelines, as it could enhance the overall quality and suitability of their submissions for publication.

Furthermore, our study suggests that PV occurrences in JOI may be influenced by the cultural and linguistic norms associated with the country of origin of the journal, as noted by Izunza (2020). This observation aligns with the framework of language typology, as proposed by Li and Thompson (1976), which distinguishes between subject-prominent and topic-prominent languages. The correlation between voice usage and linguistic typology stems from the inherent struc-ture of these languages, wherein active voice tends to align with subject-prominent languages such as those spoken in English-speaking countries, while passive voice is more closely associated with topic-prominent languages like Indonesia. Moreover, the inclination of Indonesian authors to employ PV in their writings may be influenced by cultural factors. Basthomi (2006) suggests that Indonesian authors often incorporate indirect rhetorical strategies from their native language (L1) when composing in English. Consequently, this may result in their arguments being perceived as weaker, as they conceal their identity behind third-person perspectives in academic prose. This reliance on PV, characterized by its use of third-person references, could potentially diminish the persuasive impact of their arguments within the text.

We find the journals' guidance to completely avoid PVs somewhat limiting, as it overlooks the nuanced role PVs play in conveying meaning within sentences. Our analysis indicates that authors encounter difficulties in adhering strictly to this recommendation, as PVs often serve a vital function in structuring and contextualizing their intended message. In line with the viewpoints of Bush (1981) and Millar et al. (2013), we argue that simply converting PVs to AV forms does not necessarily result in improved writing quality.

In some instances, PV could make the text wordier and unclear while AV construction tended to make the text more readable and comprehensible (Riley, 1991). A common issue

associated with clarity pertained to dangling modifiers. Dangling modifier occurred when a word or phrase modified a missing subject from the sentence and instead another subject appeared in its place. For instance, in the mentioned excerpt (6), there is ambiguity about the subject responsible for the observation. The sentence implies that «*it*» conducts the observation. To enhance clarity, we could revise the sentence to AV, indicating who performed the action, such as «***we*** *found out that students did not*.»

Excerpt 6: During the observation, it **was found out** that students did not complete the list of the types and subtypes of the word formation processes. (JOI-206)

In addition, the usage of PV occasionally resulted in lengthy and verbose sentences, making it challenging for readers to discern the intended meaning. In excerpt (7), the authors excessively employed PV to create a single complex sentence, presenting redundant information about *a ministerial policy* and *which has been known worldwide bearing the name of its author*, which may be unnecessary for the readers.

Excerpt 7: At the national level, this concern **has been translated** into a ministerial policy in the form of the Ministry of Education and Culture decree **entitled** *Permendikbud* (*Peraturan Menteri Pendidikan dan Kebudayaan*) no. 22, 2016, which stipulated that students should develop critical thinking skills in school, **guided** by the taxonomy which **has been known** worldwide bearing the name of its author, Benjamin Bloom. (JOI-101)

In certain cases, PVs are essential for achieving conciseness, helping to prevent an overreliance on AV constructions, which can lead to monotony and lack of variety in writing style. Therefore, while we acknowledge the importance of clarity in communication, we advocate for a balanced approach that recognizes the utility of PVs alongside AVs in scholarly writing. For instance, the utilization of AV occasionally resulted in a distortion of the author's intended message, as noted by Ferreira (2021). Furthermore, when attempting to convert certain bare-passive clauses like into non-passive forms, it often led to the creation of unnaturally lengthy sentences that deviated from conventional writing norms. This exemplifies the complexity of relying solely on AV, particularly when it comes to maintaining conciseness in scholarly communication. Consider the following examples:

Excerpt 8: Though used as a motivational tactic, fear appeals can elicit either a challenge or a threat appraisal. (JOI-205)

Comparison for excerpt 8:

Though **we** used fear appeals as a motivational tactic, **it** can elicit either a challenge or a threat appraisal.

In the above example, the passive voice construction in the original sentence («*used as a motivational tactic*») is more concise than the corresponding active voice construction («***we*** *used fear appeals as a motivational tactic,* ***it*** *can elicit*»). Despite being more concise, the passive voice effectively

communicates the intended message and maintains clarity. Top of Form

Furthermore, the selection between AV and passive structures depends on where the author places emphasis in the sentence. Take a look at the following examples:

Excerpt 9: Agentive passive

These clause-combining strategies are used by academic writers to achieve efficiency and to build logico-semantic relationships. (JOI-103)

Agentive passive as in the excerpt 9, although written in the PV, the author(s) highlighted that academic writers use these clause-combining strategies, emphasizing their importance to the reader rather than focusing on the writers themselves. This choice suggests an intentional emphasis on the strategies rather than the actors involved.

Excerpt 10: Semi passive

They were interested in improving on the basis of automated feedback. (JOE-105)

In excerpt 10, the sentence is written in the passive voice as it lacks a grammatically active equivalent, despite conveying an active meaning. The doer, «they,» is mentioned at the beginning of the sentence. This construction highlights an active intention behind the action, even though it is expressed in the passive voice.

Excerpt 11: Pseudo passive

I just hope that it gets interpreted well. (JOE-208)

Pseudo passive as in the excerpt 11, although written in the active voice, the sentence conveys a passive meaning. Despite this, we agree with Riggle (1998) that writing instruction or handbooks should promote general principles for the appropriate use of both active and passive voices, rather than outright discouraging authors from using the passive voice.

CONCLUSION

In conclusion, our research makes a substantial addition to the ongoing discussion about the use of AV and PV in scholarly writing. Expanding on previous studies, we verified a purposeful allocation of these voices throughout various sections of research papers, with active voice being prevalent in 'Introduction' sections for its confident portrayal of research premises, while passive voice predominated in 'Method' sections, emphasizing methodological precision. This strategic approach to voice selection corresponds with guidance from prominent publishers and demonstrates authors' awareness of journal style guidelines, as illustrated by the notably lower occurrence of passive voices in journals such as JOE compared to JOI.

However, we advise against strict adherence to journal rules that insist on avoiding PV entirely. Our study shows that PV constructions play an important role in organizing and explaining authors' messages, especially when using AV might make sentences too long or unclear. While AV is good for making text easier to understand, whether it is suitable depends on the situation. Sometimes, PV is better for making sentences shorter and clearer. Additionally, our analysis of different PV constructions shows their subtle roles in academic writing.Top of Form

Moving forward, we advocate for a balanced approach that recognizes the value of both AV and PV in academic writing. Rather than imposing strict rules, writing guidelines should encourage authors to consider the intended emphasis and clarity of their sentences when selecting between AV and PV constructions. Embracing this balanced approach will enable scholars to maintain effective communication while preserving the richness and diversity of their writing styles. Additionally, future research endeavors should aim to broaden the scope of analysis by incorporating a more extensive range of research articles, while educators should emphasize the importance of clarity in teaching AV and PV

usage to students, advising against unnecessary repetition that may impede comprehension.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

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

Yazid Bashtomi: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Validation; Visualization; Writing – original draft.

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Literary Works and Technology Aids Inclusion in Foreign Language Learning: Case of Kosovo Students' Approach

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ABSTRACT

Introduction: The research in this paper was adapted to provide insight into the expectations, prejudices, and openness of higher education students of the University of Prishtina to the inclusion of literary material in the teaching/learning of English and French as a second foreign language (FL2). Simultaneously, as the modern and technologically developed world requires, the paper deals with the opinion on the contribution of appealing teaching material and technology aids in the acceptance of literary works (LWs) in foreign language learning (FLL).

Purpose: Apart from some excerpts in the course books, LW inclusion in foreign language learning (FLL) is almost non-existent in the Kosovo education system. Through this study, we concurrently aim to raise the awareness of the students of the advantages that literary works can bring into the foreign language classroom incurring learner-centred teaching/learning, progression of critical thinking and judgment skills as well as sharing experiences and opinions through non-linear and more spontaneous manner.

Method: In this study, 69 respondents are freshmen at the University of Prishtina (UP), Faculty of Philology who are mainly future teachers of foreign languages and elected English and French language as their FL2. The method used in this paper consists of quantitative and qualitative approaches aiming for a more thorough analysis through the SPSS statistical computer program and descriptive statistics.

Conclusion: The findings revealed that the students have a positive approach to the merge of LWs and foreign language learning, less through printed LWs and more through digitized literature. Hence, applying the merging of literature with language, in the new pedagogical practices and English/French language curricula can be optimistic expectations.

Significance: The significance of the study lies in the fact that this under-investigated issue can help in creating insight into the current condition in FL classrooms and help FL curriculum changes in the Kosovo middle and upper high schools as well as higher education FL course curriculum. This study raises hope for merging language and literature in FL classrooms.

KEYWORDS

approach, affiliation, English/French foreign languages, inclusion, literary works, technology aids

LIST OF ABBREVIATIONS

FL – Foreign language
FL2 – Second foreign language
FLL – Foreign language learning
LL –Language learning
LW – Literary works
UP – University of Prishtina

INTRODUCTION

Curricular Framework of Undergraduate Education of the Republic of Kosovo includes the English language as a first FL and French, German, and Italian as FL2s (one to be selected) besides Albanian as the mother tongue or mother tongues of other minorities such as Turkish and Bosnian. The field of Language and

Communication, within the Curricular Framework, states the importance of the aesthetic value of foreign languages, highlighting the inclusion of literature in the language courses. [1] As per Course Curricula (2019), in Kosovo's education system English language classes start from the pre-school level, while other FL2s (selected one between French or German), start from the sixth grade. While in Upper-secondary schools of Social Sciences, the English language is held 3 academic hours per week (45min.x3) and other FL2s 2 hours per week (45 min. x 2), a distinct difference is seen in Upper-secondary schools of Natural Sciences which include 2 academic hours per week for both English and other second FLs (ex. French). Although the twelfth-grade course curricula within the "Concept unit" asserts "The Literary and Non-literary texts" (Kurrikula Lëndore/Course Curricula, 2019, p. 22), as part of the course material, there are no LWs mentioned in any of the FL syllabi. Moreover, the English and French language program of the twelfth grade includes various communication activities and cultural inputs, yet it does not refer to any LW as suitable material for reaching specified objectives.[2]

The current state of the FL classrooms in Kosovo witnesses a very low presence of literature in the forms of several paragraphs of novels, short poetry, or occasional short stories included in the course books. Language instructions mainly focus on grammar rules, such as tenses, and the application of those rules (Kelmendi, 2018). The weakness of this long-lasting methodology is the monotony and limitation of the students with the grammar instructions not offering real situations. Nevertheless, this approach offers clarity and is familiar to students hence do not create panic among them. This raises the question of whether higher education students are hesitant to this approach due to their FLL in the previous education process, and if this mindset can be altered if the students get motivated with new methods and activities. As per Khatib et al.'s (2011) extensive research on the topic of literature and FLL, and our thorough inquiry on the historical development of the literature-language merging in FL classrooms, some of the benefits which source out of the FLL and literature unity are the authenticity of the material, motivation, cultural/intercultural awareness, intensive/extensive reading practice, sociolinguistic/pragmatic knowledge, grammar and vocabulary knowledge, language skills, emotional intelligence, and critical thinking.

Once students' interest is properly determined and they are convinced of the benefits of this fusion, changing of thus far applied methodology can be planned. In support of the blending of language and literature in boosting receptive and productive skills, it was further sought affiliation through the introduction of technology and media in the classroom as the aiding element which gained an increase in usage among Generation Z. At this point, within FL classrooms there were demonstrated embracing features and was shown advance in learning language through literature, additionally including literature activities through digitized text and activities.

The exploration of the possibility of integrating the fields of language with literature was urged by the authors'/professors' engagement in the departments of German and French language and literature where English and French were elected as second foreign languages. Evaluation of the actual state of Kosovo's education system and UP students' attitudes about the approach of inclusion was planned as a precedent to spread this merging method county-wide.

The future steps towards the inclusion of LWs will be determined by the responses of the students since as per Kozinski it is a sustainable medium in language learning based on the fact that modern time learners prefer involvement in their learning process. The paper is based on the idea that LWs offer sufficient involvement in the author's and characters' experiences which will cause the transition from one topic to another and more practice in all four skills in language learning.[3] Furthermore, Viana & Zyngier in their study with empirical results proves that language-literature integration equips students with autonomous thinking without repetition of teacher's and critics' interpretations and that this mastery is necessary for the students of every geography (e.g. United Nation's fourth development goal on 'quality education'),(2020, p.349).

Kasumi (2016) raises his concern that Kosovo Curricula cannot be complied with concerning the Communicative Approach in English language teaching in secondary schools due to the lack of teachers' qualifications, as well as lack of resources. Kasumi is referred hereby due to the lack of studies regarding literature inclusion in FL classrooms in Kosovo, which is similarly disheartening in terms of teachers' preparation, and students' openness to new methods, besides the availability of learning material and technology aids, the fact which emphasizes the necessity of the issue to be studied. When speaking about teachers' knowledge acquisition, we rely on Krivokapic who writes that practical ap-

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[1] For more on Curricular Framework of Pre-University Education of the Republic of Kosovo (eng.) refer to, *Korniza Kurrikulare e Arsimit Parauniversitar të Republikës së Kosovës*. (2017). p.40. Ministry of Education, Science and Technology. The Republic of Kosovo. https://masht.rks-gov.net/uploads/2017/03/korniza-kurrikulare-finale.pdf

[2] For more on Course Curriculum/Lesson Programs-Twelfth (eng.) grade refer to, *Kurrikulat lëndore/programet mësimore- klasa e dymbëdhjetë*. (2019). p.20. Ministry of Education, Science and Technology. The Republic of Kosovo. https://masht.rks-gov.net/uploads/2019/08/klasa-e-dymbedhjete-gusht-2019.doc

[3] For more on new generation's leaning on immersive learning: Kozinsky, S. (2017). *How Generation Z is shaping the change in education*. https://www.forbes.com/sites/sievakozinsky/2017/07/24/how-generation-z-is-shaping-the-change-in-education/?sh=125f51b65208

plication is learned during academic education (2018, p. 11). Hence, the acquaintance with this approach during bachelor studies will make students, who are statistically 70 % future teachers of FLs in primary, lower-middle, and upper-middle schools, the ultimate means of spreading this approach. The acquaintance will widen the benefits of this authentic, and attractive material which can provide students with rich vocabulary, develop their imagination and creativity, trigger their emotions which leads to a connection to the material, improve their analytic approach, urge conversation, and interaction all through attractive and technologically aided material, the combination of which will raise the cultural awareness in our students who are designated to be global citizens.

This research paper aims to answer the following questions:

(1) How hesitant/open were higher education students to learn FLs through literature?

(2) Could attractive material change the approach of the students/respondents?

(3) Could technology aids/multimedia contribute to embracing the learning of FL through literature?

LITERATURE REVIEW

Progression of the Language-Literature Blending Approaches

Tracing the historical development of literature usage in LL, we deem it important to mention Kramsch & Kramsch (2000) who in their study of the twentieth-century articles write, "Literature has been used for the aesthetic education of the few (the 1910s), for the literacy of the many (1920s), for moral and vocational uplift (1930s-1940s), for ideational content (1950s), for humanistic inspiration (1960s-1970s), and for providing an 'authentic' experience of the target culture (1980s-1990)." Further, it is noted the issue of the level pertinence, hence advanced level suitability for the inclusion of the literature in FL classroom as a popular approach of the mid-twentieth century, outreaching the ends of the twentieth century with literature inclusion for the communication, vocabulary enrichment, and critical thinking development purposes (Kramsch & Kramsch, 2000, p. 567; Granath, 2017, p. 7). Regarding the twenty-first century, we referred to Carter who celebrates the increased profile of literature in FL acquisition after its withdrawal in the field of research in 1986 (2007, p.10).

Benefits of Literature in Foreign Language Classroom

In order to support the conviction of the benefits of literature-FLL union, it was turned to, Almeida et al. (2020) who advocate the inclusion of literature in FLL due to its enrichment with the intercultural skills which make one more adaptable and versatile, all required skills for the contemporary world; as well as, Romero et al. (2018) who enforce the idea of picture books, film, and multimodal texts usage and creation as pedagogic tools in language teaching. Stefanova & Bobkina write on the enthusiastic stance of the students regarding the LW incorporation as it affects their critical thinking among other benefits (cited in Widiastuti & Ayamsi, 2023). Similarly, Zengin et al. (2019) present a 95% positive answer on students' consideration of the literature as benefiting language learning material. Likewise, Hismanoglu was referred to as a supporter of LW integration in the FL classroom as a diverse, authentic material (2005).

Oppositions of Language-Literature Blending

We cannot deny multiple oppositions of the integration of literature in FL classrooms, for various reasons starting from the syntax as per Savvidou, as literary text not being written in Standard English "the creative use of language in poetry and prose often deviates from the conventions and rules which govern standard, non-literary discourse, as in the case of poetry where grammar and lexis may be manipulated to serve orthographic or phonological features of the language" (2004, p.1); further, from language level suitability to the appropriate themes. Nevertheless, "the opponents to using literary text as a language learning resource should most probably realize that the objective is not to study literature, but to exploit it to study the language in its many forms of use against usage" (Petriciuc, 2019, p. 128).

Power of Technology-Literature-Language Learning Triad

Focusing on technology and multimedia, we referred to Hughes (2007) who states that linguistic, auditory, and visual "modalities" used in written words change in the digital environment, subsequently, changing our understanding of the text. Hughes further writes about the students' positive impression and their seeing LWs, respectfully "see poetry differently" after the "sound/music, text, and images to synthesize their ideas" (2007). Further, a study dedicated to the use of technology in teaching LWs writes of the positive outcome due to the "increase of the students' comprehension level and critical thinking skills" with a focus on "creating visualizations of the texts, showing compatibil-

ity with the digital versions of literary texts, being comfortable with interactive hypertexts and eventually achieving higher learning outcomes" (Alfaruque et al., 2023, p. 283). Having this starting point, the hope for the technology-literature-language learning triad was encouraged even further.

Cases Which Proved Benefits of Language – Literature Merging

Examples like the ones of South Asian structure using literary text as the main source in their textbook or the idea of Sweden which based on studies proved the benefits of literature integration in English classrooms hence making it compulsory in upper-secondary schools (Granath, 2017), were stronger catalysts, to follow these examples, at least partially. Moreover, in Swedish upper-secondary schools:

For English 5, literature and other fiction are mentioned as central content, but no examples are provided. For English 6, both "[t]hemes, ideas, form and content in film and literature; authors and literary periods" and "[c]ontemporary and older literature, poetry, drama, and songs" (Skolverket, 2011, n.p.) are listed. For English 7, "[c]ontemporary and older literature and other fiction in various genres such as the drama" (Skolverket, 2011, n.p.) are mentioned. The teaching of literature is advocated, in other words, and some specifics regarding what is to be taught are given. (Granath, 2017, p. 2)

This kind of research was an enormous encouragement to instilling literature in FLL courses in the Republic of Kosovo enforcing this blend and hopefully laying the foundation for its sustainability as a new pattern. This outline does not promote the 'memorizing' of a speech or poetry as a form of language mimesis which is likewise mentioned by Gilroy and Parkinson (1997) and considered dangerous by Carter and Long (1991), but it is meant to be used for its inciting nature of discussion and argumentation, and not sole acceptance of the offered opinion. Additionally, we referred to the Common European Framework of Reference that suggests learning from "real-life situations" to be able to act in real-life situations. [4]

METHOD

Aiming more systematic research, mixed method approach was employed, where through the quantitative research, respectively survey, detailed insight on the scale of differing approaches were identified, which was presented through descriptive statistical analysis; while through the application of qualitative research, through unstructured interviews students' true feelings and perceptions on their openness

to the issue of LW inclusion in FL classroom was reached, since as per Salkind, "qualitative research methodology also lends itself to a mixed methods approach that employs both qualitative and quantitative procedures to expand the depth and scope of a research study" (2010, p. 1127). On the other side, the literature review was referred to just to find reference points and supporting elements of this study.

Participants

Subjects of the survey were the first-year students of the Faculty of Philology, UP, Department of German Language and Literature and French Language and Literature who had the opportunity to elect English and French as an FL2 between English, French, German, Spanish, Italian, or Croatian (student of German department electing other than the German language, while students of French department electing other than the French language). The total number of respondents is 69 who are students of English and French as FL2 groups. At the beginning of their education, the generations of our respondents in Kosovo, started learning FLs, initially English language, from the sixth grade of lower-middle school, and later other FLs in upper-middle school (different from the current generations who start English in preschool and other FL in the sixth grade), therefore have learned FLs for eight years, nevertheless never used them as a medium of instruction for other subjects (ex. biology, physics, history, etc).

Respondents' ages vary between 17 and 19, and 98 % graduate from public upper-secondary schools and only 2% from private schools which are usually very expensive for the general population, hence majority send their children to public schools. The Faculty of Philology statistics show gender disbalance in the faculty of 79% female and 21% male students. Similarly, the gender distribution among our respondents is 92% female, 8% male.

Instruments

A questionnaire of 22 questions in total was distributed to the respondents, students of UP, Faculty of Philology. The instrument questionnaire in the first part required information on respondents' opinions of language level suitability and approach toward the inclusion of literature in FLL, while the second part inquired if there could appear a change in their approach if the technology/multimedia is involved in the classroom activities which included language learning through LW.

The survey did not include questions that would lead students toward certain answers. The questionnaire included mixed-type questions and most of the questions required

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[4]   For more information on learning foreign languages from real-life situation refer to Council of Europe. (2018). *Common European Framework of Reference for Languages: Learning, Teaching*, Assessment Companion Volume with New Descriptors. p.27. https://rm.coe.int/cefr-companion-volume-with-new-descriptors-2018/1680787989

additional explanatory information which were conducted through unstructured interviews. The analysis of the questionnaire was descriptive, re-counting both statistic results and the open-ended questions. With the aim to encourage students to be more factual in their responses, the questions were kept simple and specific, while the interview was conducted in a friendly atmosphere.

The survey was deliberately conducted by the end of the second semester to ensure that the students/respondents were familiar with the various LWs (such as poetry, short stories, and excerpts from novels) related activities in the FL classroom, which included online sources such as videos, trailers, quizzes, digitized texts, and hypertext.

Data Analysis and Procedure

Data analysis is a systematic method of examining the data which was gathered for gaining results and reaching conclusions.[5] Within the data analysis, the collected data from the questionnaire was processed using Statistical Package for Social Science (SPSS 15.0) as a statistical computer program, to gain precision of the quantitative results. On the other side, the open-ended questions were subject to qualitative data analysis which added narrative to complement the numeric data. Initially, data entry was done as both qualitative responses and quantitative unstructured interview data were entered. This entry provided percentage circulation and descriptive statistics which is used to summarize data meaningfully. Similarly, to the unstructured interview results, the findings of the quantitative research were presented flexibly with the combination of graphs and narrative since as per Merriam (2009) "no standard format is required for reporting qualitative research, but that a diversity of styles is allowed with room for creativity. Narratives may be accompanied by commonly accepted methods such charts and graphs or may be illustrated by photographs or drawings."

Upon this, the questionnaire and interview aimed at revealing students'/respondents' stance regarding the continuation and intensification of the language-literature activities, along with uncovering their opinion on technology aid benefits in their language learning through literature.

RESULTS

The results present both qualitative and quantitative information where in between the description of the table content it includes more insight gained from the unstructured interviews besides the percentage shown in the tables. The results of the combined information reveal students' attitudes regarding the use of literature less for literary purposes and more as a language learning tool.

Results of Students' Anticipations in FL Learning and FLL Background

The opening question of the survey inquired about students' expectations on the focal points in FLL (grammar, literature, culture), which it is believed is prejudice based on their previous high school education as per curricula in the Republic of Kosovo (Table 1). The results show that the expectations of students during their studies in the elected English/French language course are anticipating mastering grammar over culture and literature, a fact which proves students' alienation from the literature-language combination and not even expecting to read any kind of literary material during FL courses.

Table 1

What did you expect to study in the foreign language course at university?

	N	**%**
Grammar	63	91.3%
Culture	3	4.3%
Literature	3	4.3%

Note. a. Dichotomy group tabulated at value 1. $P1 Frequencies

Tables 2 and 3 are incorporated to help comprehend the readiness and capability of students' comprehension of LW in their elected English/French language course due to their language level. Herewith, they point out their ability and confidence to use literature in English language learning.

Table 2

What is your level (previous knowledge) of the foreign language?

	N	**%**
A2 (Pre-Intermediate)	3	4.3%
B1 (Intermediate)	31	44.9%
B2 (Upper-Intermediate)	32	46.4%
C1 (Advanced)	3	4.3%

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5   For more information on data analysis refer to: Fitzpatrick, J.J. & Wallace, M. (2006). *Encyclopaedia of Nursing Research* (2nd. ed.). Springer Publishing Company. https://rlmc.edu.pk/themes/images/gallery/library/books/Nursing/Encyclopedia_of_Nursing_Research__Second_Edition__Fitzpatrick_Encyclopedia_of_Nursing_Reserach_.pdf. (Accessed: 28.01.2024)

Table 3

Do you think your foreign (English/French) language level is suitable for using literary works for further improvement?

	N	*%*
Yes	48	69.5%
No	9	13%
Not sure	12	17%

Although the prevailing percentage of respondents say that their English/French language level is not an obstacle to including literary work for further improvement of the language, none of them is ready to learn a language solely through LWs, yet they choose a combination of the traditional method and literary material or only traditional method (Table 4), which shows "some" openness to adding "new" material in classroom disregarding the fact that literature was rarely used in their thus far English language learning (Table 5).

Results of students' preferences about FLL approaches

Table 4

Which method do you prefer in English/French language learning?

	N	*%*
Traditional	20	29%
Combination of both	42	61%
Only through literary works	7	10%

Table 5

How often was literature included in English/French language teaching/learning in your previous education?

	N	*%*
Very often	3	4.3%
Often	16	23.2%
Rarely	50	72.5%

With the assessment of the additional unstructured interview responses to the question in Table 6, it is noticed that the students show a binary stance where half of them find that literature helps them to acquire more language, learn other skills, and enrich their vocabulary, while others see it as unnecessary and redundant.

Practically almost 50% balance seen in the previous question (Table 6) does not remain in the following question where appears an inconsistency as a group on whether they would prefer more literary material in the classroom, which results in the prevailing acceptance of the advantages coming from the LW inclusion in particular in the development of their critical thinking where they would question issues in

the storyline, interpret and evaluate the plot developments, argument their own ideas (Table 7) in the English/French language.

Table 6

Would you like to have more literary texts in language learning?

	N	*%*
Yes	33	47.8%
No	33	47.8%
Not sure	3	4.3%

Table 7

Do you think that including literature in an English/French language course could help you in improving your critical thinking?

	N	*%*
Yes	46	66.7%
No	6	8.7%
To some extent	17	24.6%

Regarding the topics used during the exercise of the productive skill of speaking, students express their preferences for discussion of their personal life/experience since as they state, the matter does not require any additional information or general knowledge in addition to any English/French terminology over the information outside their comfort zone (Table 8). They are in control of their personal life and the information they want to share, the language they want to use without fear of being corrected by the teacher or classmates. Furthermore, during the interview, students express their hesitance in discussing LW due to its requirement for content knowledge, which validates Han's (2007) statement on students' beforehand preparation as a poking agent of self-confidence for speaking in the English language.

Table 8

What topic urges you the most to discuss during the class of English/French language?

	N	*%*
About your personal experience/life	39	56.5%
About developments in the world/your country	27	39.1%
About a literary work (poetry, short story, novel)	3	4.3%

While in the possibility to choose whether to use literary or non-literary work for discussion, students prove their lack of affiliation with the literary texts, hence stating the prevailing motive in favor of non-literary work "due to being fond of its factual nature" (Krasniqi, Hykolli, 2021, p. 90). When limited among LWs, respondents state that short stories are favourite due to their features of being brief, without many elements, settings, and characters, and easier to follow the

pace. The remaining part which selected poetry accepts the fact that poetry is brief yet sometimes challenging due to its limited form and elision of information (Tables 9 & 10).

Table 9

Do you prefer literary or non-literary texts for discussion?

	N	**%**
Literary	28	40.6%
Non-literary	41	59.4%

Table 10

Which literary material would you prefer in language learning?

	N	**%**
Novel	20	29.0%
Short story	34	49.3%
Poetry	15	21.7%

One of the benefits provided by using LWs in language learning is learning new vocabulary. LWs provide the reader with vast fields and terminology which sometimes results in students' incomprehension of the words in the text. According to students' responses, when they encounter an unknown word, they in almost equal percentages either check up the unknown words or guess them from the context (Table 11); the act which results in new vocabulary learning, since as per Collins "Experiences with storybook reading, involvement in conversations, and exposure to rare words influence early vocabulary development" (2005, p. 408).

Table 11

Do you prefer to check up on the unknown word in the dictionary or guess it from the context?

	N	**%**
Check-up	31	44.9%
Guess	32	46.4%
N/A	6	8.7%

The result concerning the speaking activities about the literary material reveals their interest in human issues and concerns which are representatives of the real-life which surrounds them as a part of society. Characters' troubles to some measure reflect students' troubles, and characters' struggles conveyed through the themes and settings in the LW are the struggles they have experienced or heard of in their daily life, which is the element that contributes to their affiliation with the material (Table 12). While speaking on the themes varies due to their personal affiliation percentage of their interest in time and place (settings) is lower due to students' lack of knowledge regarding the social, political, and economic background of certain periods and places.

Table 12

Do you prefer discussing about... (speaking activities)

	N	**%**
Characters	27	39.1%
Setting (place, time)	18	26.1%
Themes	21	30.4%
Other	3	4.3%

Further, the results show that the students are not very fond of creative writing, as a productive skill and part of the classroom activities, through speculating or imagining new endings of the stories, hence expressing their emotions and creativity. Consequently, they prefer reading and commenting on the developments in the plot to creative writing (Table 13, 14), where besides the receptive skill of reading they lean on the productive skill of speaking considering it easier and "gone with the wind" in case of making mistakes during their expression.

Table 13

Do you like reading the story in half, stopping and speculating/imagining what is to happen next (creative writing)?

	N	**%**
Yes	21	30.4%
No	41	59.4%
Not sure	7	10%

Table 14

Do you prefer to read the story as a whole and comment on the developments?

	N	**%**
Read and comment	44	63.8%
Imagine and write/complete	25	36.2%

Results on Students' Opinion on Technology Aid Involvement in LW Comprehension

Students coming from Generation Z are known to receive their first phones and use computers before their teenage, are prone to digitalization. Hence, they display a higher connection to digitized LWs, especially hypertexts as opening doors to further information, in comparison to printed text which is considered plain and boring in terms of attraction and interest (Table 15, 16).

Students show their interest in technology and materials offered online expressing the boost of their motivation and

longer connectivity to the material read. With the inclusion of technology aids, they exhibit an immense increase in their enthusiasm and further affiliation with the material (Table 17). Even the opinion of idle reading, presented in Table 13, is changed with the introduction of the digitized version of the literary text.

Table 15

Do you think literature can be a suitable material for language teaching using technology aids/multimedia?

	N	%
Yes	52	75.3%
No	9	13%
Not sure	8	11.5%

Table 16

Do you think that the inclusion of digitized text and hypertexts will help you comprehend a literary work?

	N	%
Yes	51	73.9%
No	10	14.4%
Not sure	8	11.5%

Table 17

Do you think your creative writing would boost if used digitized literary works?

	N	%
Yes	53	76.8%
No	8	11.5%
Not sure	8	11.5%

Students show their interest in the LWs prepared as an illustration that they were presented during the classes believing that the explanation or description of these illustrations gives them consistency in their speaking or writing activity. Adding to this, as addicted to novelty and allurement, they consider this different form of LWs can equally be entertaining and inducing to speaking skills (Table 18).

Table 18

Do you think that illustrations/manga editions of the LWs would induce you to speak in the target language?

	N	%
Yes	56	81%
No	9	13%
Not sure	4	5.7%

Besides the illustration and manga editions of LWs, students express even vaster interest in visualizing the LW which was made in a movie or series, be it the entire movie or a trailer where in the open questions they point out that this tech-

nological aid used in the classrooms through connecting on the YouTube, or any other source which offers the material, would help them put a face to the name/character, thus, enforce the emotional connection and creation of opinions consequently the expression of the opinions and interacting activities induced (Table 19).

Table 19

Do you think seeing a movie or a trailer (based on a novel) would help your comprehension?

	N	%
Yes	60	86.9%
No	6	8.6%
Not sure	3	4.3%

Similarly, respondents' interest in digitized texts and hypertexts as material aiding in their comprehension of the literary text, hence enhancing their connection; in almost the same percentage they consider online activities (such as quizzes, trailers, and Wheel of Fortune game) regarding appointed literary text as more attractive and more engaging in terms of more modernized approach and suitable to their interest (Table 20).

Table 20

Do you think that online activities on literary works would increase your engagement?

	N	%
Yes	59	85.5%
No	7	10.1%
Not sure	3	4.3%

Knowing the fact that literary material inclusion in language learning is not common practice in Kosovo schools and universities, students show uncertainty in 42.0% of cases if literature should be included in new English/French language curricula, 40.6% is welcoming this practice, while 17.4% is not leaning towards it (Table 21).

Results on Students' Perception about the Curricular Changes

Table 21

Do you think literature should be included in new English/ French language curricula?

	N	%
Yes	28	40.6%
No	12	17.4%
Not sure	29	42.0%

While we witness dichotomy and indecision in literature inclusion in new English/French language curricula without specifying the involvement of digitized text and activities,

with the inclusion of technology, the gap in the interest vs noninterest becomes bigger and the stance more decisive, where more than 75% are favouring the idea and more than 13% are doubtful of its benefits (Table 22).

Table 22

Do you think literature should be included in new English/ French language curricula with the use of digital activities?

	N	%
Yes	52	75.3%
No	9	13%
Not sure	8	11.5%

DISCUSSION

Without overlooking the fact that FL2 learners in language courses, high schools, and universities in Kosovo mainly rely on coursebooks and linear learning, this paper strived to reveal the stance on changes in the FLL approach. The beginning was pessimistic due to the rooted and accustomed system and the fact that English classrooms are dominated by course books which limit language learning and prevent the creative side of the LWs (Sivasubramaniam, 2006, p. 254-255 retrieved from Petricius, 2019, p. 127).

Students' Anticipations and FLL Background

In an attempt to answer the first research question on the *openness/hesitance of higher education students for learning the English/French language through literature*, although students show openness to combining traditional language learning through course books, with learning through LWs, they demonstrate a dosage of uncertainty and imparity when asked more directly if they would truly like to have more LWs in language courses. Herewith, they are split into two where half of them consider literary material interesting and attractive, and the others display uncertainty since they are not very fond of literature in general, and it causes them stress even in their mother tongue. This is not a surprising result since it is a well-known fact, among the Kosovar population, that reading LWs is not a strong side of Kosovar culture. This is also proven in the most recent research done by the 'Dukagjini' publishing house and ETEA an NGO which revealed the bitter reality of Kosovar society where 17% of respondents do not read any books within a year, while only 7% of respondents are involved in activities dedicated to book promotion, furthermore, Kosovo citizens cannot give even one title of a book they have read in 31% cases, and cannot tell three books they know about in 52%.[6]

Students' Approach Preferences in FLL

Despite the difficulty in instilling interest in book-reading, students do not disregard the benefits of literary works since they count advantages such as stimulating their imagination, developing expressions, enriching their vocabulary, improving critical thinking, and growing more confident in speaking and writing in the English/French language, the awareness which approaches the students to Karakoc's (2016) argument on the importance of the critical thinking as crucial for the labour market.

A very small number have doubts about the benefits as they consider themselves forced to read in the English/French language or consider it not of their interest while learning a language, leaving the impression of the misconception of the "presence" of literary material in the FL course, similar to what Khatib (2011) mentioned that this sources out of students' uncertainty, lack of confidence, and inexperience of how to use this material. Their hesitance can further be justified by another Khatib et al. study who writes on possible potholes literature can bring where it emphasizes the syntax, lexis, phonetics, semantics, literary notions, and cultural barriers (Khatib et al., 2011).

In the cases when given closed-ended questions and only the choices among LW genres, although students favour short stories, their justification is that they can easily comprehend them, emphasizing that short stories are "catchy" material. Regarding speculating or imagining the ending of the newly started book, though not admirers of this activity and preferring to read the story "idly" until the end relying on the author's imagination, several liked the activity saying it would activate their brain and involve them in the plot. Likewise, in some cases "writing" would rather be avoided, since it requires inspiration and creativity, as well as demands knowledge of the writing elements, all the prerequisites which discourage them from applying this method. A smaller number of the respondents who expressed their love for writing solely relied on their personal interest and not the procedure previously practiced in the classroom, commenting, "Reading is a good way to learn but writing is the best way to show what we have learned" (Respondent x).

Mentioning the benefits of LW for new vocabulary acquisition, respondents are split in almost half on the question if they would rather "stop and check the unknown word" in the dictionary or simply "guess" it from the context, as some express their dislike to depend on something in the process of reading, moreover, to stop the reading and turn to some other source; others prefer to guess the meaning

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[6]   For more on reading interest of the Kosovar populations refer to: Sefa, R. (2023). For Book Day, research is published: Over 30% of Kosovo citizens do not know how to name any book they have read [Eng.]. Nacional Nacionale, https://nacionale.com/kulture/dita-e-librit-hulumtim-me-shume-se-gjysma-e-popullsise-se-kosoves-nuk-lexojne-fare-libra

but certainly check-up for the sake of accuracy and joy that correct guessing would give them.

Striving to answer the second research question on the *effectiveness of attractive material* as an element which can change students' approach to merging literature and LL, it was noticed that students are generally open to the inclusion of literary material in FL classrooms, for various reasons, starting from the novelty that this method brings to the boosting of their speaking skills following their increased receptive skills. Material preferred is the short story and in a particular reading of the same, placing the writing behind due to the prejudice on its requirements of talent and creativity. It is believed that the dosage of hesitance towards literary material which comes from the traditional methodology used in the classroom and skepticism towards changes can be converted and change their opinion with the right material and activities which would entertain them, there while, teaching new expressions, new vocabulary, and fluency in the target language and therewithal overturn their expectancy of mainly studying grammar in the English/French language course. Simultaneously, it has strived to prove to the students the rationality of the opposition to Edmondson who disregards literature's influence on cognitive skills over other texts (Paran, 2008, p. 477) and validates Jose's point on the fact that LWs provide students of different language competences, cognitive styles, and cultures, with information which simplifies their comprehension of the text (2021, p. 897). Further to support our persistence on the benefits of the LW in FL classrooms Lin et al. write on Communicative-culture (Cc) as an element where cultural understanding facilitates communication of people of different cultural backgrounds, as a fact that will steer students to reading an LW if it has common elements with their own culture (2020, p.123). Moreover, LW inclusion in FL classrooms promotes the development of literary, stylistic, cultural, linguistic, and educational competencies per Barette et al. (2010, p. 216).

Students' Opinion on Technology Aid Involvement in LW Comprehension

The students' skepticism was not a surprise, knowing the methodology used thus far in the language learning courses starting from the primary school to the university level, as well as relying on the given percentage of their expectations on what they are going to learn in their English/French language course at university, which was based on the prejudice and traditional learning methodology. Students being obliged to read any LWs were rarely introduced to entertaining activities yet were in a read-comment manner which resulted in grading and seldom for fun.

With the attempt to come closer to Generation Z who depend on technology in their everyday life and observe their maintained or changing approach when technology aids/

multimedia is involved, we referred to the research results which through empirical observation prove the impact of ICT on our lives, including education (Sulistiyo et al., 2022, p. 17). Similarly, Hughes (2007), writes on the wide-ranging power of the new media which boosts students to better perceive an LW. Furthermore, Alfaruque et al. write on the benefits of COVID-19 which hastened 'technology-assisted teaching practices' and effacing of traditional, passive literary text reading strategies in the EFL classroom which vary from visual to auditory skills. Subsequently, Alfaruque et al. assure the usefulness of technology in education facilitating the designing of the teaching material; and boosting students' communication through the use of hyperlinks, digital documents, and audio-video recordings (2023, p. 278). Hence, to answer the third research question on *technology aids/multimedia contribution to embracing FLL through literature*, the inquiry as expected shows more enthusiasm as digitized literary text and technology involvement in learning language through literature display students' attraction to the idea since it challenges traditional learning. The revolution which happens in the world through technology and digital tools hit language and literature as well. Hence, the inclusion of digitized text and hypertexts is seen as more acceptable even as enhancing elements for respondents' productive skill of writing. Similarly, Sastre and Garcia (2022) write on digital reading and digital creation of literary text adding that it creates a versatile learning style (p.4).

The remaining productive skill, speaking and comprehension is believed to be aided by the illustration or manga editions of the LWs among other online activities, which were introduced to the students from various Internet sites such as Actively Learn, where they welcomed novelty methods. This can be backed up by Sun's (2023) inquiry on illustrations in the LWs who mentions British Book Trust laureate Pauline Baynes' illustrations of The Lion, the Witch and the Wardrobe by C.S. Lewis where Lewis himself admits the help of illustrations in comprehension of his book (p. 204).

The interest rises even further when respondents are introduced to visualized versions of the LWs, in the form of a movie or at least a trailer, watched via YouTube or similar available sites. This again can be supported by the meta-analysis study of the movie trailer use in FL classrooms which writes on the importance of the film and trailers as support tools due to its visual and emotional effect on the learner (Saidah&Islam, 2017, p. 7).

Students' Perception of the Curricular Changes

The results of the survey showed that students are not wholly convinced of LW's official inclusion in syllabi in FLL until involvement of the digital aids, proving the importance of engaging material in the classroom with Generation Z.

CONCLUSION

This study aimed to reveal the approach of the students of the UP, Faculty of Philology in regard to LW inclusion in FLL. A high percentage of the students of the Faculty of Philology are employed as foreign language teachers, or at any point in their career work as a teacher. Therefore, their readiness to get acquainted with this approach during bachelor studies will give students, who are statistically 70 % future teachers of FLs in primary, lower-middle, and upper-middle schools, the ultimate means of spreading it.

Surprisingly, a high number of students list the benefits of the literary work, nevertheless, as expected, students initially showed hesitance in LW inclusion in the FL classroom because of the lack of experience with this 'new' method which was never introduced to them through entertaining activities.

As anticipated, students' reaction changes drastically with adding the technology aids into LW-FLL combination, whether this be through videos, movies, trailers, illustrations, and games, it further converges attractive teaching-learning. This facilitates receiving of the information through visualization and, consequently, provides information that increases the interest of the students with various language cognition styles. In conclusion, the revolution which came with the technology ought to be incorporated in the FL classrooms as well, which will bring a positive impact on the acceptance of the teaching material by Generation Z students. Hence, the problem lies in the design and preparation of teaching material selected by the teachers rather than students' inability to learn with new methods and approaches.

In terms of the implications, based on the advocacy of Almeida (2020), Stefanova & Bobkina (2023), Zengin et al. (2019) in favor of increasing the literature work inclusion in FL classrooms, the paper aimed to reveal the attitude of the students in Kosovo by comparing the situation in Kosovo vs abroad. Further, being inspired by the examples of South Asian structure and the idea of Sweden to integrate various LW based on the students' FL level (such as poetry, drama, or short story as per their interest) there were obtained optimistic results to follow the examples and integrate literature in FL classrooms as mandatory. This study simultaneously discloses students' stance on the implication of digitized aids based on similar studies which proved their positive impact on communication and learning outcomes as per Alfaruque (2023), Hughes (2007), Saster and Garcia (2022) due to hybridity and versatility of the method as per C.S. Lewis.

Therefore, we can conclude that the provided results are considered innovative and contributing assets and can serve to the improvement of foreign language curricula in secondary schools and in higher education systems where each UP faculty includes at least two FL (one to be selected).

Limitations and Suggestions of the Study

Students who are the subject of this research and the product of Kosovo's lower and upper high school system have limited experience in the literature inclusion in FLL. Thus far used course books include short poems or excerpts from the various LWs with no improved teaching approach of complying with the age, cultural background, or similar elements which would increase their interest in this new method.

On the other side, the Faculty of Philology, where the respondents come from, statistically is prevailed by female gender, thus the research does not have gender division nor results on gender taste differences.

Studies on the merging of language and literature in FL classrooms are neglected in Kosovo which subsequently limits the study. On the other side, while in other parts of the world, recent studies show optimistic results in merging the field of language and literature, the curriculum and the teachers still hesitate to undertake changes in their classrooms. Hence, this research can serve as a recommendation for the Ministry of Education, Science, and Technology (MEST) to review the Language and Communication section of the Core Curricula and its subdivision of the FL (English, German, and French) which are taught in primary and secondary education and add to English/German/French language syllabuses of each level, and particularly upper secondary schools, adding more LW as an effective medium of FLL. This study can further be backed up with the research done in the primary and secondary education students as well as students of other faculties around Kosovo, for more accurate results.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

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

Lendita Gjikolli: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Validation; Visualization; Writing – original draft.

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Predictive Effects of English Classroom Anxiety and Motivation on Chinese Undergraduate EFL Learners' English Achievement

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ABSTRACT

Background: Second language (L2) learning is complex, multifaceted, and greatly influenced by various factors, of which individual factors like anxiety and motivation are important ones. Though anxiety and motivation have been shown to be strongly correlated with each other and interact with other variables to collaboratively affect L2 learning, mixed findings have been revealed, demonstrating the complexity of the interrelationship between L2 anxiety and motivation and their interactive effects on L2 learning.

Purpose: Guided by the self-determination theory, this study aimed to explore the levels of and the relationship between English classroom anxiety and motivation as well as their predictive effects on Chinese undergraduate EFL (English as a foreign language) learners' English achievement.

Method: The participants were 571 Chinese university students who answered an 8-item English Classroom Anxiety Scale, a 35-item English Learning Motivation Scale, and a 5-item Demographic Information Questionnaire. They also reported their scores in tests that they had recently taken and self-rated their overall English proficiency as indicators of their English achievement.

Results: The study revealed the following major findings: (a) the participants had a small to moderate level of English classroom anxiety, and a medium level of intrinsic motivation, extrinsic motivation, personal goals and expectancy/control in English learning, (b) English classroom anxiety was significantly negatively correlated with all motivation scales, (c) English classroom anxiety was not only significantly negatively related to but negatively predicted the students' English achievement, and (d) significantly positive correlations existed between English learning motivation and English achievement. Of different motivation dimensions, intrinsic and extrinsic motivation positively predicted the latter.

Conclusion: The findings of this study further demonstrate the importance of anxiety and motivation in L2 learning and the need to explore anxiety-reduction strategies, increase students' intrinsic and extrinsic motivation, and strengthen their expectancy in L2 teaching and learning, thus contributing to the understanding of foreign language anxiety and L2 motivation and enriching the current literature on the two issues.

KEY WORDS

English classroom anxiety, motivation, English achievement, predictive effect

INTRODUCTION

Given the complexity and multifaceted nature of second language (L2) learning, individual factors significantly influence both the learning process and its outcomes (Dörnyei, 2005). Among these factors, foreign language anxiety (FLA) is a prevalent negative emotion experienced by many L2 learners (e.g., Li, Dewaele & Jiang, 2019; Khalaf, 2016, 2017; Khalaf & Omara, 2022; Piniel & Albert, 2018). Motivation is another crucial determinant, driving learners to actively develop their L2 competence (Dörnyei, 1998; Gardner, 1985). Research consistently demonstrates a strong correlation between anxiety and motivation, with both factors interacting with various other variables to collectively influence L2 learning

outcomes (e.g., Alamer & Alrabai, 2022; Al-Hoorie, 2018; Li & Wei, 2023; Teimouri, Goetze & Plonsky, 2019; Zhang, 2019). Nonetheless, the complexity of the interrelationship between L2 anxiety and motivation is evident through the mixed findings in the literature.

Despite extensive research on L2 anxiety and motivation, the intricate nature of these issues, combined with the diversity of learner populations and learning contexts, necessitates ongoing investigation (e.g., Dörnyei, 2005; Scovel, 1978). Much of the existing research on L2 motivation has been guided by Gardner's (1985; Tremblay & Gardner, 1995) or Dörnyei's (2005, 2009) motivational theories. However, there is a notable gap in research utilizing alternative theoretical frameworks such as the expectancy-value theory and the self-determination theory (e.g., Alamer & Lee, 2019; Eccles & Wigfield, 2020). Furthermore, while many studies confirm the interrelationship between FLA and motivation, the complexity of this relationship—potentially influenced by differing measures of FLA and motivation—highlights the need for further research.

In light of these considerations, this study, guided by the self-determination theory (Deci & Ryan, 1985), aimed to explore the levels and interrelationship of English classroom anxiety and motivation, as well as their predictive effects on English achievement among Chinese university EFL (English as a Foreign Language) learners. The research sought to address the following questions:

(1) What are the levels of the students' English classroom anxiety, motivation, and English achievement?

(2) How do the students' English classroom anxiety and motivation predict their English achievement?

LITERATURE REVIEW

Anxiety in L2 Learning

Anxiety is described as "the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system" (Spielberger & Gorsuch, 1983, p. 1). This complex emotion can be categorized into various types, including trait anxiety, state anxiety, and situation-specific anxiety (Horwitz, Horwitz & Cope, 1986; Spielberger, Gorsuch & Lushene, 1970). In the early 1970s, when researchers began focusing on anxiety in the context of second language acquisition, they encountered a range of diverse and sometimes conflicting findings, largely due to the use of different measurement instruments (Scovel, 1978). Consequently, Scovel (1978) emphasized the need for researchers to clearly define the type of anxiety under investigation. Subsequently, a consensus emerged that foreign language anxiety (FLA) is a situation-specific form of anxiety, characterized by "the worry and negative emotion-

al reaction aroused when learning or using a second language" (MacIntyre, 1999, p. 27).

As Horwitz et al. (1986) proposed the notion of foreign language classroom anxiety (FLCA), which is "a distinct complex construct of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 128), anxiety has been extensively researched in L2 learning in varying contexts via questionnaires, interviews, observations, diaries and so on (e.g., Botes, Dewaele & Greiff, 2020; Chiang, 2010; Dewaele, Botes & Meftah, 2023; Dong, 2021; Dong, Liu & Yang, 2022; Gregersen, 2020; Horwitz et al., 1986; Li & Wei, 2023; Liu, 2022; MacIntyre & Gardner, 1994; Teimouri et al., 2019; Tsang and Dewaele, 2023; Zhang, 2019). These studies generally reveal that anxiety exists in many L2 learners, that anxiety predominantly negatively affects L2 learning, that different factors cause anxiety in L2 learners, and that FLA changes over time. For example, Botes et al.'s (2020) meta-analysis reported that FLCA was negatively correlated with five types of learners' achievement (i.e., reading-, writing-, listening-, speaking-, and general academic achievement). Dong (2021) meta-analyzed research on Chinese EFL learners' FLA and learning outcomes and found a moderate negative correlation between the two variables. Liu and Xu (2021) examined how foreign language listening anxiety (FLLA) affected Chinese university students' English listening test performance and how proficiency and gender mediated FLLA's effects on English listening test performance. They collected data from two different populations at two universities in China. The study showed that when working alone, FLLA significantly negatively predicted students' English listening test performance, and that when working with proficiency and gender, English proficiency level, gender and FLLAS2 (proficiency in English listening) significantly predicted the latter.

Meanwhile, Strack et al. (2014) suggested that although anxiety is generally debilitating, there are certain people who can be pushed to try harder when facing difficulties and experiencing anxiety. This was confirmed by Bailey's (1983) diary study of anxiety when she was learning French as a foreign language and Liu and Xiangming's (2019) study that anxiety sometimes motivated students to study harder. Evidently, more research is needed to better understand the roles of anxiety in L2 learning.

Motivation in L2 Learning

Motivation is often regarded as a multifactorial trait and has garnered increasing attention since the 1950s (e.g., Gardner, 1985; Dörnyei, 2005, 2009; Yu, Peng & Lowie, 2022). Gardner (1985) introduced a socio-psychological model of L2 motivation, identifying three core components: the effort invested in achieving language learning goals, the desire to accomplish this, and the satisfaction derived from learning the language. The theory further distinguishes between in-

tegrative and instrumental motivation. Integrative motivation refers to the «motivation to learn a second language because of positive feelings towards the community that speaks the language» (Gardner, 1985, p. 82). In contrast, instrumental orientation highlights the practical benefits and values of learning a second language.

Alongside the publication of the self-determination theory on L2 motivation, numerous studies have investigated L2 motivation (e.g., Gardner, 1985; Masgoret & Gardner, 2003; Tremblay & Gardner, 1995). These studies generally demonstrate that motivation significantly benefits L2 learning, that learners are driven to study second and foreign languages by various motives, and that L2 motivation can be influenced by diverse factors. For instance, Masgoret and Gardner (2003) conducted a meta-analysis on L2 motivation, confirming the positive relationship between integrative motivation and L2 achievement. Building on these findings, Tremblay and Gardner (1995) introduced new concepts such as goal, persistence, and attention into the socio-psychological L2 motivation model, leading to the proposal of the socio-educational L2 motivation model.

Dörnyei (2005, 2009) incorporated the concept of self into the motivation construct and proposed the L2 motivational self-system theory (L2MSS), whose core elements are ideal L2 self, ought-to L2 self and L2 experience. The relationship between the three components of L2MSS and L2 achievement has been explored in depth after L2MSS gradually became the "dominant framework" for L2 motivation studies in the recent decade (e.g., Al-Hoorie, 2016, 2018; Li & Zhang, 2021). For example, in Moskovsky et al. (2016), 360 first-year non-English majors at two Saudi universities answered the L2MSS questionnaire and took IELTS reading and writing practice tests. The results showed that the three L2MSS components positively predicted the students' intended learning efforts but were not consistently associated with their performance in IELTS reading and writing tests. Al-Hoorie (2016) collected data from 311 male EFL learners at a Saudi Arabian higher education institution and found that the students' English achievement was negatively correlated with their ought-to L2 self and insignificantly correlated with their ideal L2 self. Li and Zhang (2021) surveyed 198 Tibetan students from two bilingual high schools where Tibetan was the teaching language and Chinese was a required course. The results showed that all three components of the L2MSS either directly or indirectly predicted Tibetan students' intended effort to learn Chinese as a second language, and that the students' ideal L2 self positively but their ought-to L2 self negatively predicted their L2 achievement. Al-Hoorie (2018) meta-analyzed 32 studies of L2MSS which covered 39 samples and 32,078 learners, and found that the three components significantly predicted the students' intended effort and weakly predicted their L2 achievement.

Among the various motivation theories proposed, the self-determination theory (Deci & Ryan, 1985; Urhahne &

Wijnia, 2023) has been extensively employed in empirical studies to explain motivation in L2 learning. According to this theory, individuals possess innate self-organizational drives towards psychological growth and require supportive conditions to fulfill three fundamental psychological needs: competence, relatedness, and autonomy. The theory categorizes motivational orientations into three types: intrinsic motivation, extrinsic motivation, and amotivation.

Intrinsic motivation refers to engaging in a behavior out of inherent interest and enjoyment. Extrinsic motivation involves performing a behavior to obtain external rewards or avoid punishment. Amotivation is characterized by a lack of perceived competence, value, or interest (Ryan & Deci, 2017). Compared to external pressure, intrinsic motivation is generally considered the primary driver of lifelong learning behavior (Ryan & Deci, 2017). Research has demonstrated that both intrinsic and extrinsic goals can predict L2 learning outcomes (e.g., Phan et al., 2020; Schmidt, Boraie & Kassabgy, 1996; Wang & Lee, 2019).

Based on these concepts, Schmidt et al. (1996) proposed an L2 motivation model involving nine components, including intrinsic orientation and extrinsic orientation, expectation of success, and so on. They also designed a 50-item motivation questionnaire to measure Arabic students' English learning motivation levels. Factor analyses extracted seven dimensions out of the scale: 5-item Intrinsic Motivation, 15-item Extrinsic Motivation, 5-item Personal Psychological Needs, 9-item Expectations and Locus of Control, 4-item Attitudes, 6-item Anxiety, and 6-item Motivational Strength. Administering this questionnaire and other scales to 152 Vietnamese university students, Phan et al. (2020) found that the participants were mainly extrinsically motivated and thus advised instructors to increase intrinsic motivation by making language learning fun and relevant to students' interests and passions.

Together with the self-determination theory (e.g., Alamer & Almulhim, 2021; Alamer & Lee, 2019), other motivational theories such as the expectancy-value theory (Atkinson, 1957; Dong et al., 2022; Urhahne & Wijnia, 2023) and the control-value theory (Li & Wei, 2023) have been applied to explain L2 motivation and its relationship with L2 achievement in recent years. For example, Nagle (2021) adopted the expectancy-value theory to study the interrelationships among L2 Spanish learners' motivation, persistence, and L2 achievement. The participants were 79 college English-speaking students who enrolled in a Spanish course. They completed a survey on expectancy-value motivation, L2 learning experience and classroom willingness to communicate, and took the course's final examination. The study showed that expectancy of success significantly predicted L2 achievement and that intrinsic value was significantly correlated with the learners' persistence and motivated behavior. In order to explore the interaction of expectancy-value beliefs and academic oral communication (AOC) anxiety

in bilingual Chinese postgraduate students while they were learning academic oral English over a period of a semester, Liu and Dong (2021) collected interview and questionnaire data from 74 Chinese postgraduate learners of English at two time points of the semester. The study showed that one-third to half of the participants experienced AOC anxiety and had a low expectancy of themselves about AOC, and that more than half of them held high attainment, intrinsic value, utility value and cost value of AOC in English.

Although such research has been increasing in recent decades, it remains limited as most motivation studies are guided by Gardner's (1985) L2 motivation model or Dörnyei's L2MSS (2005, 2009). As Dörnyei and Ushioda (2021) suggested, "no theory of motivation is likely to grasp the whole picture" (p. 9). Therefore, more research is necessary to explore L2 motivation from various perspectives and provide a more comprehensive understanding of motivation in L2 learning.

Relations between Foreign Language Anxiety and Motivation

The relationship between FLA and motivation has long been discussed. According to the affective filter theory (Krashen, 1985), if learners are highly motivated and less anxious, the filtering effects will be weaker, thus leading to better learning outcomes. Subsequent research shows that both FLA and motivation interact with each other and various other factors to affect SL/FL learning, or that their relations with SL/FL learning outcomes are moderated by various factors, including age, gender, educational level, motivation, strategy use, and so on (e.g., Dong et al., 2022; Gardner, 1985; Liu & Xu, 2021; Teimouri et al., 2019; Zhang, 2019). For example, Dong et al. (2022) revealed a negative correlation between FLA and L2 motivation; Tahmouresi and Papi (2021) found that Iran university students' L2 writing anxiety positively predicted their writing motivation but negatively predicted their L2 writing achievement. Alamer and Almulhim (2021) found that Saudi EFL university students' controlled motivation positively predicted their general language anxiety. Wu and Lin (2014) found that Taiwanese university students' L2 motivation was negatively correlated with L2 anxiety, while L2 anxiety mediated the association between L2 motivation and L2 performance. Liu and Dong's (2021) longitudinal study indicated that expectancy negatively predicted AOC anxiety at time 1 while expectancy, intrinsic value and cost value powerfully predicted the latter at time 2. Pan and Zhang (2021) focused on 55 Chinese undergraduate English majors and found that their FLA was insignificantly correlated with their ideal L2 self but significantly correlated with their ought-to L2 self and motivated behaviors.

The literature reviewed above shows that foreign language anxiety and motivation are indeed related to each other although findings are not always consistent. This inconsistency might be due to the use of different measures of anxiety and motivation in the studies, which justifies continuous research on the relationship of the two.

METHOD

Participants

Most college students in China are required to take compulsory English language courses during their first and second years, with the option to enroll in advanced English courses during their third and fourth years. To maximize participant recruitment, this research employed random sampling. A link to the questionnaires used in this study was created on Wenjuanxing, a data collection platform in China, and distributed to potential university students in Beijing.

This sampling method resulted in a total of 571 participants (238 males and 333 females) from various universities in Beijing. The participants' ages ranged from 18 to 26 years (M = 20.18, SD = 1.57). Among the respondents, 154 were first-year students, 254 were sophomores, 105 were juniors, and 58 were seniors. Additionally, 279 (48.86%) majored in engineering, 276 (48.34%) studied humanities and social sciences, and 16 (2.80%) pursued natural sciences.

Instruments

The questionnaire used in this study covered four dimensions: demographic information, English achievement, English classroom anxiety, and motivation. Both anxiety and motivation questionnaires were adapted from the existing literature (Gardner, 1985; Schmidt et al., 1996) and were rated on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree).

Background Information Questionnaire

The demographic information questionnaire was used to obtain background information, such as age, gender, grade, discipline and the time spent learning English per day.

English achievement

Students' English achievement was measured by their English test scores and self-ratings. The participants were asked to report their scores in the English tests that they had recently taken, which were then standardized on the scale of 1 to 100. They were also asked to self-rate their overall English proficiency on the scale of 1 (very poor) to 10 (native-like).

English Classroom Anxiety Scale

The eight-item English Classroom Anxiety Scale (ECAS) was adapted from the French Classroom Anxiety Scale developed by Gardner (1985), with the expression 'French' be-

ing changed into 'English'. Intending to measure students' anxiety in English classrooms, the ECAS proved to be highly reliable in the present study (Cronbach's alpha a = .77), as did the original scale (Gardner & MacIntyre, 1993). This scale was employed because it was short, unidimensional and fit the purpose of the present research. Moreover, using short-form measures can reduce the time required for survey completion and allow researchers to include more scales in the questionnaire (Heene et al., 2014).

English Learning Motivation Scale

The 35-item English Learning Motivation Scale (a = .86) (ELMS) used in this study was adapted from the Foreign Language Motivation Scale in Schmidt et al. (1996). To better fit the present research, three modifications were made: a) The expression 'Egypt' was changed into 'China', b) a new item "I study English because I want to study abroad" was added to the extrinsic motivation dimension, and c) items concerning attitudes, anxiety and motivational strength were excluded. The final ELMS had 35 items and covered four dimensions: (a) Intrinsic motivation (a = .79) (5 items) (e.g., 'I enjoy learning English very much'), (b) extrinsic motivation (a = .78) (16 items) (e.g., 'English is important to me because it will broaden my view'), (c) personal psychological goals (a = .62) (5 items) (e.g., 'I really want to learn more English than I have done in the past'), and (d) expectancy/control components (a = .57) (9 items) (e.g., 'This English class will definitely help me improve my English').

Data Collection and Analysis

The study was approved by the Research Committee of the Department. Then, all of the questionnaire items were translated into Chinese, back translated into English and double-checked by the researchers, and then distributed to students online accompanied by a consent form in the middle of a semester when different English tests (e.g., course

mid-term exam, college English Test bands 4 & 6, TOFEL, IELTS, etc.) were held. All participation was voluntary. Finally, 651 questionnaires were received, of which 571 were valid for further analysis.

SPSS 27.0 was used to remove missing and abnormal data, assess the reliability of the scales, and conduct a series of analyses to answer the research questions, including descriptive statistics, correlation analysis, and multiple stepwise regression analysis.

RESULTS

Levels of English Classroom Anxiety, Motivation and English Achievement

To explore students' levels of English classroom anxiety, motivation and English achievement, means and standard deviations (SD) of the scales were computed. The results are presented in Table 1, which shows that all the measures had a normal distribution. As shown in Table 1, the participants scored 2.89 (SD = .71) on ECAS, below the scale midpoint 3, suggesting that they experienced a low to medium level of English classroom anxiety. Meanwhile, the participants scored 3.10 (SD = .84) on IM, 3.14 (SD = .51) on EM, 3.40 (SD = .66) on PG and 2.98 (SD = .46) on EC, above or around the scale midpoint 3, indicating that the participants generally had a medium level of intrinsic motivation, extrinsic motivation, personal goals, and expectancy/control in English learning.

Table 1 also shows that the participants had a mean test score of 71.91 (SD = 9.91) and a mean of 5.72 (SD = 1.92) in self-rated overall English proficiency, indicating that the respondents were generally intermediate English learners.

Table 1

Means and standard deviations of and correlations between ECAS and ELMS scales (N = 571)

	Mean	SD	skewness	ECAS	IM	EM	PG	EC	STS	SOEP
ECAS	2.89	.71	1.81	1						
IM	3.10	.84	-.119	-.52**	1					
EM	3.14	.51	.014	-.28**	.30**	1				
PG	3.40	.66	-.190	-.28**	.32**	.66**	1			
EC	2.98	.46	.310	-.10*	.11**	.49**	.46**	1		
STS	71.91	9.91	-.094	-.22**	.26**	.08	.15**	-.01	1	
SOEP	5.72	1.92	-.413	-.38**	.43**	.25**	.24**	.06	.41**	1

*Note. * = p ≤ .05; ** = p ≤ .01; ECAS = English Classroom Anxiety Scale; IM = intrinsic motivation, EM = extrinsic motivation, PG = personal goals, EC = expectancy/control, STS = standardized test scores, SOEP = self-rated overall English proficiency coefficient of determination: small = r ≤ 0.1; medium = r = 0.3; large = r ≥ 0.5 (Cohen, 1988)*

Correlations between English Classroom Anxiety and Motivation

As shown in Table 1, ECAS was significantly negatively correlated with the ELMS scales (r = -.10 ~ .52, p < .05), suggesting that students who were more anxious in English classrooms were generally less motivated to learn English by intrinsic motivation, extrinsic motivation, or personal goals, and had lower expectancy/control of English learning. Moreover, ECAS was significantly negatively correlated with the student's standardized test scores (STS) (r = -.22, p ≤ .01) and self-rated overall English proficiency (SOEP) (r = -.38, p ≤ .01), meaning that a more anxious respondent tended to have lower English achievement.

Meanwhile, IM, EM and PG were generally significantly positively related to STS (r = .15 ~ .26, p ≤ .01) and SOEP (r = .24 ~ .43, p ≤ .01), indicating that a more motivated student tended to have higher English achievement. Surprisingly, EC was not significantly related to STS or SOEP.

Table 1 also reports a significantly positive correlation between STS and SOEP (r = .41, p ≤ .01), suggesting that a respondent who obtained a higher score in the English test self-rated his/her overall English proficiency higher.

Predictive effects of English Classroom Anxiety and Motivation on English Achievement

Multiple stepwise regression analyses were run to investigate the predictive effects of English classroom anxiety and motivation on students' English achievement, with ECAS and ELMS scales as independent variables and STS and SOEP as the dependent variable respectively. The results are reported in Table 2.

As shown in Table 2, regression analyses produced two models for STS, which shows that IM (intrinsic motivation)

and ECAS (English Classroom Anxiety Scale) were powerful predictors for students' standardized test scores (STS). Namely, IM ($β$ = .199, t = 4.227, p = 0.000) positively and ECAS ($β$ = -.118, t = -2.496, p = 0.013) negatively predicted the participants' test performance, with a medium but to the lower end effect size.

Table 2 shows that regression analyses produced three models for SOEP, which shows that IM, ECAS and EM (extrinsic motivation) were powerful predictors for the students' self-rated overall English proficiency (SOEP). Namely, IM ($β$ = .294, t = 6.703, p = 0.000) and EM ($β$ = .106, t = 2.711, p = 0.007) positively while ECAS ($β$ = -.200, t = -4.583, p = 0.000) negatively predicted the participants' self-rated overall English proficiency, with a medium but to the higher end effect size.

DISCUSSION

This study not only showed that the English Classroom Anxiety Scale and the English Learning Motivation Scale were highly reliable but also that they were significantly negatively correlated with each other, as reported in similar studies (e.g., Dong et al., 2022; Pan & Zhang, 2021, Wu et al., 2022). Nevertheless, since some studies revealed mixed findings (e.g., Liu & Dong, 2021; Pan & Zhang, 2021), more research is required to better understand the relation of the two issues and to explore causes that may affect the relation.

Levels of the Students' English Classroom Anxiety, Motivation and English Achievement

Statistical analyses showed that the participants had a small to medium level of English classroom anxiety (mean = 2.89), consistent with the finding in Liu (2022) and Wu et al. (2022) which also targeted Chinese university EFL students and in Tsang and Dewaele's (2023) study of Hong Kong young learners. One possible reason was that Chinese college

Table 2

Multiple regression coefficients and significance of predictors for students' English achievement (N = 571)

Predictors	1. STS				
	$β$	t	p	VIF	Cohen's f^2
IM	.199	4.227**	.000	1.369	.071
ECAS	-.118	-2.496*	.013	1.369	.081
Predictors	**2. SOEP**				
	$β$	t	p	VIF	Cohen's f^2
IM	.294	6.703**	.000	1.421	.225
ECAS	-.200	-4.583**	.000	1.402	.277
EM	.106	2.711**	.007	1.127	.291

Notes. * = p ≤ .05; ** = p ≤ .01 effect size of Cohen's f^2: small = f^2 ≤ .02; medium = f^2 = .15; large = f^2 ≥ .35 (Cohen, 1988)

students have become more skilled at learning and using English as they have had increasingly more exposure and access to the language in recent decades. Moreover, as student feedback submitted anonymously at the end of each semester is mandatory and plays an important role in assessing teaching and teacher promotion in Chinese universities, teachers are provided an important source   to reflect on their teaching and make adjustments accordingly. Hence, teachers might have realized the influence of anxiety on students' English learning and have implemented various teaching strategies to alleviate it. Nevertheless, a higher level of anxiety (mean = 3.00 ~ 3.40) was found in other studies in similar contexts (e.g., Jiang & Dewaele, 2019; Pan & Zhang, 2021; Su, 2022; Wang & Li, 2022). This might be due to the differences in research settings and populations. For example, both Jiang and Dewaele (2019) and Wang and Li (2022) focused on freshman students at a particular Chinese university; Su (2022) specifically looked at sophomores with intermediate and low levels of English proficiency. In contrast, the participants in this study were intermediate learners of English in different years of study from different universities in Beijing. In a word, various factors may affect anxiety levels experienced by L2 learners (Jiang & Dewaele, 2019). This may also explain the finding that international students in Dewaele and MacIntyre (2014) experienced a low level of anxiety (mean = 2.75). All these justify the necessity of continuous research on foreign language anxiety.

Meanwhile, the study revealed that the participants had a medium level of personal goals (PG), IM (intrinsic motivation), EM (extrinsic motivation), and expectancy/control in English learning (EC) (mean = 2.98~3.40), indicating that the participants were generally (highly) motivated to study English. The findings about IM and EM were similar to those reported in many existing studies (e.g., Schmidt et al., 1996; Zhang, 2019), while not much research on learners' personal goals in L2 learning can be found. Additionally, the respondents' relatively lower expectancy/control was partially consistent with Dong et al.'s (2022) finding that Chinese high school students were "less expectancy-motivated" in English learning (p. 9). This, however, needs to be further researched.

Analyses of standardized test scores and self-ratings indicated that the participants considered themselves intermediate learners of English, as found in Dewaele and Li (2022). This was probably because the students were modest and underestimated their English proficiency, as modesty is often valued in Chinese culture.

Predictive Effects of English Classroom Anxiety and Motivation on English Achievement

Correlation analyses revealed a significantly negative correlation between ECAS and STS and SOPE. Regression analyses

showed that ECAS significantly negatively predicted the participants' test scores and self-rated overall English proficiency. These findings suggested that English classroom anxiety was a powerful predictor of students' English achievement. Higher levels of English classroom anxiety might hinder students from performing well in tests and properly rating their own L2 proficiency, further supporting the finding in earlier studies (e.g., Botes et al., 2020; Dewaele et al., 2023; Dong et al., 2022; Li & Wei, 2023; Teimouri et al., 2019; Tsang & Dewaele, 2023; Wu et al., 2022). According to Dörnyei (2005), learners may frequently experience negative emotions like anxiety because of concerns about negative evaluations. FLA thus can impose negative effects at all stages of the L2 learning process, from input to output (MacIntyre & Gardner, 1994). Such unpleasant feelings can make learners uncomfortable with L2 learning and lead to procrastination, lack of confidence, decreased learning efficiency, and even giving up (Liu & Xiangming, 2019). Consequently, research is needed to explore strategies to help learners reduce anxiety in L2 learning (Toyama & Yamazaki, 2021a).

Concurrently, correlation analyses revealed significant positive correlations between ELMS scales and STS and SOEP. Regression analyses showed that intrinsic motivation positively predicted students' STS and SOEP and extrinsic motivation positively predicted SOEP. These findings indicated that motivation was also a powerful predictor of students' English achievement, as found in many existing studies (e.g., Alamer & Lee, 2019; Al-Hoorie, 2018; Dong et al., 2022; Gardner, 1985; Li & Zhang, 2021; Liu & Dong, 2021). These findings also supported the idea that compared with external pressure, intrinsic motivation may be the primary motivation for one's learning behavior throughout life and can predict positive L2 learning outcomes across various educational levels and cultural contexts (Ryan & Deci, 2017). This may be because students who are intrinsically motivated tend to be more persistent in learning.

Though the participants' personal goal was not a significant predictor of their English achievement, it was significantly positively correlated with STS and SOEP. According to goal-related theories, there are various types of motivational goals, such as the mastery goal, performance goal, performance-approach goal and performance-avoidance goal (MacIntyre & Serroul, 2015). A possible explanation for the insignificant predictive effects of goal was that this study only adopted five items to assess the participants' general personal goals in English learning and might fail to reflect the full power of goals in L2 learning.

This study found that expectancy/control was neither significantly correlated with nor predicted the participants' English achievement, different from the finding in Dong et al. (2022). Expectancy is about one's personal beliefs of abilities and effectiveness, the expectations to succeed or fail in per-

forming a task, and the feelings of control over outcomes (Eccles et al., 1983). If students believe that they can control their success and failure in learning, they can expect to gain academic achievement (Findley & Cooper 1983). Generally, the expectancy formed by L2 learners "has important motivational implications, because it also allows us to anticipate and perceive rewards that follow a given behavior" (Tremblay & Gardner, 1995, p. 507). Students with a high expectation of success in finishing certain tasks such as completing a language course are more likely to engage in the task and stick with it longer against difficulties, while learners with lower expectations to succeed are more likely to give up (Pintrich, 1988). As such, the insignificant relation between expectancy/control and English achievement revealed in the present study deserves attention and further research.

Limitations of the Study

This study encountered several limitations. Firstly, the standardized test scores used may not accurately reflect students' English achievement due to variations in test aim, content construct, and difficulty level. For instance, IELTS and TOEFL exams are generally more challenging and comprehensive compared to school course exams. Additionally, self-ratings of L2 proficiency may not be reliable, as students might underestimate their abilities. Future research should employ a standardized test to measure L2 achievement to enhance reliability and validity.

Secondly, the cross-sectional nature of this study did not allow for an examination of how anxiety and motivation evolve over time. Since the effects of anxiety and motivation on L2 learning are dynamic and not static, longitudinal studies are necessary to investigate the ongoing changes in foreign language anxiety, motivation, and their impacts on L2 learning.

Furthermore, this study focused solely on the interaction between anxiety and motivation and their predictive effects on students' English achievement, without considering other potentially influential variables. Future research should explore additional variables such as gender, age, and L2 proficiency to provide a more comprehensive understanding of these interactions. This broader approach will offer deeper insights into the complex relationships affecting L2 learning outcomes.

CONCLUSION

This study uncovered several key findings regarding the levels and relationships between English classroom anxiety and motivation, and their predictive effects on English achievement among Chinese university EFL learners. The results, which were largely anticipated and partially consistent with existing literature, underscore the relevance of using self-determination theory and specific measures to assess

L2 anxiety and motivation. Consequently, this study contributes to the broader understanding of foreign language anxiety and L2 motivation, enriching the current literature on these topics.

The findings highlight the dynamic and complex nature of anxiety and motivation, emphasizing their crucial roles in L2 learning and the explanatory power of self-determination theory. Therefore, it is essential to assist students in reducing anxiety and maintaining or increasing their motivation to study a second language. First, teachers should consider employing classroom strategies derived from positive psychology to alleviate students' anxiety and enhance their positive emotions and well-being. Techniques such as promoting positive self-talk and demonstrating empathy can be beneficial. Second, addressing students' psychological needs through immediate and constructive feedback can bolster both intrinsic and extrinsic motivation. Finally, integrating technology and digital leisure activities into teaching can further engage students and support their learning process.

To validate the findings of this study, additional empirical research guided by self-determination theory is necessary. Future investigations should explore the relationships between foreign language anxiety, intrinsic and extrinsic motivation, personal psychological goals, and expectancy/control components in relation to L2 learning. Moreover, research should also focus on developing and testing strategies to reduce learners' anxiety and enhance their motivation to learn a second language.

FUNDING

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Meihua Liu: conceptualization; methodology; review and editing.

Tianhao Li: formal analysis; writing original draft; review and editing.

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Reading Comprehension Performance Among Impulsive and Reflective English Learners: Examining the Influence of Three Reading Methods

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ABSTRACT

Background: Exploring the impact of various reading methods - such as oral reading, silent reading, and the relatively understudied subvocalization method - on the comprehension abilities of language learners with different cognitive styles, including reflective and impulsive learners, can contribute significantly to understanding how different reading techniques enhance comprehension across diverse cognitive styles.

Purpose: To investigate the role of three reading methods, including oral, silent, and subvocalization, on the comprehension performance of a group of English as a Foreign Language (EFL) learners, considering the cognitive styles of impulsivity and reflectivity.

Method: In this study, 60 female students studying in first-grade senior high school were selected based on purposive sampling. Employing a counterbalanced quasi-experimental design with three treatments, the research investigated how different reading methods influenced the impulsive and reflective learners' reading performance. The impulsivity and reflectivity of the participants were determined by Eysenck's Impulsiveness Questionnaire (I.7).

Results: The results revealed that all participants, both reflective and impulsive, demonstrated better comprehension performance with oral and subvocalization methods compared to silent reading. The oral and subvocalization methods had a similar effect on their performance. Reflective learners outperformed impulsive learners across all three methods, showing significantly higher performance. Additionally, most participants expressed a preference for oral reading over the other two methods.

Conclusion: The outcomes suggest the importance of teachers' increased flexibility in utilizing diverse reading methods and considering learners' diverse characteristics, including their cognitive style, in classroom instruction.

KEYWORDS

oral reading, silent reading, subvocalization reading, impulsivity, reflectivity, comprehension performance

INTRODUCTION

Since English as a foreign language has found its place in Iranian schools' curricula, enhancing the foreign language proficiency of Iranian language learners has become one of the top priorities of educational authorities, language teachers, and learners. According to Halliday (2004), one of the language abilities in a literate society is reading comprehension skill. This skill is particularly crucial for all secondary school students, significantly impacting their academic achievement. In today's world, there exists an increasing demand for EFL learners to actively enhance their comprehension performance ability in order to fulfill their educational requirements.

Despite the considerable emphasis on reading skills within Iranian schools and even universities and substantial investment made in their teaching, most language learners struggle to comprehend the content they read (Torabi & Maleki,

2022). These inabilities might more specifically stem from insufficient knowledge of vocabulary and words (Mohammed, 2019), lexical inefficiency, unfamiliarity with complex structures, poor reading skills, lack of schemata, and learners' lack of interest (Davoudi & Yousefi, 2015). To cope with such challenges, many researchers have investigated using different reading strategies (e.g., Mehrpour et al., 2012; Okasha, 2020) or various reading methods, including reading aloud, reading silently, or less commonly subvocalization (e.g., Jafari, 2013, Robinson et al., 2019, Schimmel & Ness, 2017) to enhance the students' reading comprehension performance.

Reading aloud is simple for younger learners and has been suggested and used for decades. This method helps learners create a mental picture of the context read by teachers. In addition, It is an essential skill for improving and maintaining learners' pronunciation and vocabulary, as well as cultivating their comprehension (Senawati, 2021). Silent reading is commonly considered the natural way of reading and is observed as the most suitable for comprehension. It offers diverse advantages, including the ability to control the reading pace, fostering learners' confidence in understanding texts independently and facilitating deep comprehension of informational materials (Hopkins, 1997; Kemaloglu-Er, 2019). Subvocalization is defined as the internal articulation of words during reading, which reduces the cognitive load and helps the reader's comprehension and retention of the material (Carver, 1990).

However, existing research has primarily focused on singular reading methods, often failing to compare the influence of different methods simultaneously, or to consider how individual characteristics, such as cognitive styles, may interact with these methods. While there are studies that acknowledge the impact of cognitive styles like impulsivity (i.e., quick decision-making and risk-taking) and reflectivity (i.e., deliberate and thorough problem-solving) on general reading comprehension (e.g., Amiry & Mall-Amiri, 2015; Nemat Tabrizi & Esmaeili, 2016; Nisa et al., 2018), the impact of these cognitive styles on specific reading methods remains underexplored.

Thus, there is a noticeable research gap concerning the interplay between cognitive styles and the efficacy of different reading methods in enhancing learners' comprehension abilities. To address this gap and provide more effective solutions to reading comprehension challenges, this study aims to investigate how the cognitive styles of impulsivity and reflectivity impact the effectiveness of oral, silent, and subvocalization reading methods among high school students in Baft, Iran. The following questions guide this exploration:

(1) What is the most efficient reading method in the comprehension performance of Iranian English learners in high school?

(2) What is the most efficient reading method considering the comprehension performance of reflective and impulsive Iranian English learners in high school?

(3) Which reading method do the Iranian English learners in high school prefer and why?

METHOD

Research Design

This study utilized a counterbalanced quasi-experimental design featuring three distinct treatments to investigate how various reading methods influence the comprehension performance of impulsive and reflective Iranian EFL learners. In educational research, a counterbalanced design involves an experimental method where the influence of sequencing is controlled by ensuring that all groups experience each treatment, even though in different sequences (Ary et al., 2010).

Participants

This study included 60 female students from Narjeskhatoon High School in Baft, Kerman, all in their first year of upper secondary school (10th grade). These students, like their peers across Iran, had received three years of English instruction starting from the 7th grade. The school was selected based on purposive sampling due to its representative nature and typicality within the city, being the largest school with three 10th-grade classes suitable for the present research. All 85 10th-grade students who were placed in intact classes were assessed using the Oxford Placement Test (OPT)[1] to ensure homogeneity before the study. The participants were selected from this pool based on their OPT scores falling within one standard deviation above and below the mean, resulting in a sample of 60 students. However, all students present in the classroom received the treatment, as classes were intact, and the experiment took place during regular school hours.

The reason for selecting students from this grade was based on the assumption that having completed three years of English study, the students had attained the requisite proficiency for the experiment and had yet to decide on their intended majors, making them a representative sample of high school students. They received English instruction twice a week, with each session lasting approximately 90

minutes. Additionally, the same teacher instructed all three classes, with the researcher providing close guidance on conducting the experiment.

Instruments

Oxford Placement Test (OPT)

To tap the participants' English language proficiency level and homogenize them, the researcher used the Quick Placement Test version 1 of the Oxford Placement Test (OPT). This test examines reading skills, vocabulary, and grammar of a context, and it consists of 60 questions in two parts (part one includes 40 items and part two contains 20 items). The OPT is believed to be a trustworthy and valid tool for the initial placement of participants at various levels, and it has been confirmed to have a high level of consistency and reliability.

Eysenck's Impulsiveness Questionnaire (I.7)

To assess the participants' impulsivity/reflectivity, the researcher employed the Impulsiveness Subscale of Eysenck's Impulsiveness Questionnaire (Eysenck et al., 1985), comprising 54 items presented in a 'Yes/No' format and divided into four subscales: Impulsiveness (19 items), venturesomeness (16 items), and Empathy (19 items).

Due to the participants' limited English proficiency, a Persian version of the questionnaire adapted from Salimi (2001) was utilized. This translated version employed a 5-point Likert scale format and underwent validation with 1820 subjects, resulting in a reliability coefficient of 0.84 and a split-half reliability of 0.86. The Impulsiveness Subscale comprised 19 items, yielding impulsiveness scores ranging from 19 to 95.

Written Feedback

Following the completion of the three reading comprehension tests, students were provided with three essay-type questions in their native language on a separate sheet of paper. They were instructed to articulate their preferences regarding the reading method, the method they found most beneficial for comprehension, and the rationale behind their choices. This segment aimed to explore participants' preferences and comprehension performance further.

Materials

This study utilized three passages from The Pearson Test of English (PTE) General Level 2[1]. Each passage was followed by five comprehension questions, presented in English, featuring three-option multiple-choice answers. Multiple-choice questions are considered the most commonly used format

in standardized reading comprehension tests, and their advantage lies in the simplicity of the scoring (Koda, 2005). The first passage, titled «Students Summer Jobs,» comprised 217 words and depicted a group of students seeking summer employment to support their studies. The second passage, titled «Smoking,» consisted of 264 words and detailed the health risks associated with smoking. The third passage, «Standing Alone at the Browns' Party,» contained 290 words and narrated the story of Anna and her spouse.

Data Collection

This research was conducted approximately two months into the academic year (2019-2020). This timing was chosen to allow students enough time to adjust to the classroom dynamics, classmates, and teacher, minimizing potential stress during the study period. Additionally, this timeframe provided the teacher with sufficient opportunity to familiarize the students with the fundamentals of the three designated reading methods and how to employ each one effectively.

The Oxford Placement Test (OPT) was initially administered to ensure uniformity among participants. Subsequently, participants' levels of impulsivity and reflectivity were assessed using the Persian version of the Impulsiveness Subscale I.7 during a regular class session. Before commencing the assessment, the teacher explained the process clearly, and participants received comprehensive information about the study's objectives. Additionally, they were assured of the confidentiality of their responses and the results. The completion of the Impulsiveness Questionnaire took approximately 10 minutes, with participants instructed not to think too long when choosing their answers.

The test was administered to each group during their own class time. To avoid any threats to internal validity, the teacher explained the procedure to the students, asking them not to exchange information with other classes. Data collected comprised comprehension scores from the fifteen multiple-choice items distributed among three passages. Following the reading comprehension tests, the students were asked to answer three essay-type questions.

Data Analysis

To differentiate between impulsive and reflective learners and evaluate their comprehension performance across each method, the study utilized SPSS software (version 22) for both descriptive and inferential statistical analyses. Repeated measures analysis of variance (ANOVA) was employed to compare the effects of the three reading methods on students' comprehension, followed by post hoc Bonferroni tests to identify significant differences. Furthermore, a

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[1]   Andrew, Betsis, & Lawrence, Mamas, Succeed in PTE general level 2 (B1) 10 Practice Tests. Self-Study Edition (Greece: Global ELT Publications, 2012), 175.

series of independent samples t-tests were conducted to explore the potential relationship between students' impulsivity/reflection and comprehension across different reading methods. Lastly, participants' written feedback was summarized and tabulated using descriptive statistics, computing the mean score for each preferred method.

RESULTS

Impulsivity/reflectivity of the Participants

The initial phase involved assessing the impulsivity/reflectivity of the participants through descriptive statistics. Based on the Persian version of I.7's guidelines, participants scoring 58 or higher were deemed highly impulsive, while those scoring 57 or lower were classified as low impulsive or reflective. Out of the total participants, 45 students fell into the highly impulsive category, while 15 students were categorized as reflective.

Comprehension Performance and Reading Methods

The following table, Table 1, presents descriptive statistics outlining participants' comprehension performance across three distinct methods.

As indicated in Table 1, the oral reading method exhibits the highest mean ($\bar{x}$ = 3.41), closely followed by the subvocalization method ($\bar{x}$ = 3.21). Conversely, the silent method demonstrates the lowest mean ($\bar{x}$ = 2.51) among all. To determine the statistical significance of these observed mean differences across the methods, a repeated-measures ANOVA procedure was conducted. The results of this analysis are presented in Table 2.

Table 2 provides the F value for the «Reading methods» factor, along with its associated significance level and effect size (Partial Eta Squared). Due to a violation of the assumption of sphericity in the obtained data, the values in the «Greenhouse-Geisser» row should be considered. The results reveal statistically significant differences in mean scores among the three reading methods (F (1.991, 117.48) = 10.645, p < 0.0005). Consequently, a post hoc test was administered to explore the source of this disparity.

The Bonferroni post hoc test results in Table 3 highlight significant mean differences between the silent method and both the subvocalization and oral methods. However, no significant difference is detected between the subvocalization and oral methods.

Impulsivity/Reflectivity and Reading Methods

Table 4 below presents the performance of both impulsive and reflective participants across each of the three reading methods. Upon closer examination, it becomes evident that reflective participants outperformed their impulsive counterparts across all methods. Specifically, the mean scores

Table 1

Descriptive Statistics for Comprehension Performance

	Mean	Std. Deviation	N
Silent reading	2.5167	1.37152	60
Subvocalization reading	3.2167	1.48543	60
Oral reading	3.4167	1.49906	60

Table 2

ANOVA Results for the Comparison of Different Reading Methods

Source		Type III Sum of Squares	Df	Mean Square	F	Sig.
Reading methods	Sphericity Assumed	26.800	2	13.400	10.645	.000
	Greenhouse-Geisser	26.800	1.991	13.459	10.645	.000
	Huynh-Feldt	26.800	2.000	13.400	10.645	.000
	Lower-bound	26.800	1.000	26.800	10.645	.002
Error (Reading methods)	Sphericity Assumed	148.533	118	1.259		
	Greenhouse-Geisser	148.533	117.480	1.264		
	Huynh-Feldt	148.533	118.000	1.259		
	Lower-bound	148.533	59.000	2.518		

Table 3

Bonferroni Post-hoc Test Examining the Source of Difference among the Three Reading Methods

(I) reading method	(J) reading method	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Silent	Sub-vocalization	-.700*	.199	.003	-1.191	-.209
	Oral	-.900*	.204	.000	-1.403	-.397
Subvocalization	Silent	.700*	.199	.003	.209	1.191
	Oral	-.200	.211	1.000	-.720	.320
Oral	Silent	.900*	.204	.000	.397	1.403
	Sub-vocalization	.200	.211	1.000	-.320	.720

*Note. Based on estimated marginal means. *. The mean difference is significant at the .05 level. b. Adjustment for multiple comparisons: Bonferroni.*

for the impulsive group were 1.97 for silent reading, 2.84 for subvocalization reading, and 3.04 for oral reading. In contrast, the reflective group achieved mean scores of 4.13, 4.33, and 4.53 for the respective methods. To ascertain the significance of these mean differences, a series of independent samples *t*-tests were conducted (See Table 5).

According to Levene's test results, equal variance is assumed for all the *t*-tests. Furthermore, the significant level of each test shows that the difference in mean between reflective and impulsive participants in the use of all three methods of reading, including silent, subvocalization and oral, is significant, having the *p* values of .000, .000, and .001 and F values of .54, 8.13, and 15.48, respectively. Also, both groups gained their highest mean when using the oral method, and their lowest mean was when using silent reading.

Written Feedback Results

The tables below display the results of the written feedback, outlining participants' preferred reading styles and the rationales behind their selections. According to Table 6, oral reading emerges as the most favored reading method, chosen by 50% of all participants.

Out of the 30 participants who preferred oral reading, ten students (representing over 16%) identified it as a method beneficial for enhancing their information processing skills and vocabulary acquisition. Conversely, employing oral reading to alleviate stress and anxiety was less frequently cited, with only a 5% occurrence among respondents.

As indicated in Table 7, a mere 16.67% of participants (equivalent to ten students) favored silent reading as their preferred method. The primary rationale for selecting this method was reading for leisure, with a modest popularity of 5% (three individuals). Conversely, the least preferred reason was employing the silent method to read faster and enhance comprehension, cited by only one person (1.67%).

Based on the data provided in Table 8, approximately 30% of respondents (equivalent to 20 individuals) opted for the subvocalization method as their preferred approach to reading. The primary justification, cited by 13.33% of participants, was the enhanced concentration and deeper understanding of the text achieved through this method. Conversely, the least commonly cited reason for favouring subvocalization reading was the practice of mentally repeating ideas as they form, mentioned by only 1.67% of respondents.

DISCUSSION

Reading Methods and Learners' Comprehension Performance

The initial research findings demonstrated notable differences in participants' comprehension performance across different reading methods. Oral reading showed the highest mean score, followed by subvocalization and silent reading. However, post hoc analysis revealed significant mean differences only between oral reading and silent reading, as well as between subvocalization reading and silent reading. While oral reading may seem to exert a greater influence on comprehension performance compared to subvocalization, the disparity lacks statistical significance, indicating both methods positively impact reading performance.

Existing literature predominantly focuses on oral and silent reading, overlooking the significance of subvocalization. However, this reading method can offer significant advantages to students' reading comprehension. There are two contrasting perspectives on the benefits of subvocalization. Some argue that individuals convert visual stimuli into sounds during subvocalization to access meaning, while others propose that speech codes are generated after comprehension, aiding in semantic integration and memory retention (Lee, 2015). Despite potentially reducing reading

Table 4

Descriptive Statistics of the Reading Performance of Impulsive and Reflective Participants

		N	Mean	Std. Deviation	Std. Error Mean
Silent	Impulsive	45	1.9778	1.03328	.15403
	Reflective	15	4.1333	.91548	.23637
Subvocal	Impulsive	45	2.8444	1.47641	.22009
	Reflective	15	4.3333	.81650	.21082
Oral	Impulsive	45	3.0444	1.50689	.22463
	Reflective	15	4.5333	.74322	.19190

Table 5

Independent Samples T-tests Results Comparing the Performance of Reflective and Impulsive Participants

	Levene's Test for Equality of Variances		t-test for Equality of Means			Mean Difference	Std.Error Difference	95% Confidence Interval of the Difference	
	F	Sig	T	Df	Sig. (2-tailed)			Lower	Upper
Silent Equal variances assumed	.549	.462	-7.186	58	.000	-2.15556	.29996	-2.75600	-1.55511
Equal variances not assumed			-7.640	26.873	.000	-2.15556	.28213	-2.73457	-1.57654
Subvocal Equal variances assumed	8.135	.006	-3.707	58	.000	-1.48889	.40161	-2.29281	-.68497
Equal variances not assumed			-4.885	44.375	.000	-1.48889	.30477	-2.10296	-.87481
Oral Equal variances assumed	15.489	.000	-3.666	58	.001	-1.48889	.40617	-2.30192	-.67586
Equal variances not assumed			-5.040	49.238	.000	-1.48889	.29544	-2.08253	-.89525

Table 6

The Students' Responses for Reasons Behind Preferring Oral Reading

Number	Students' justifications	Frequency	Percentage
1	It helps me practice pronunciation, and I can pronounce words better.	5	8.34
2	It improves my understanding and comprehension of information and helps me learn new vocabulary.	10	16.66
3	It helps me cope with my stress and anxiety while reading.	3	5
4	Reading aloud helps me with my listening.	7	11.66
5	I can read faster and have a better understanding when reading aloud.	5	8.34
Total		30	50

Table 7

The Students' Responses for Reasons Behind Preferring Silent Reading

Number	Students' justifications	Frequency	Percentage
1	I do not disturb others when I am reading.	2	3.33
2	I read faster and have a better understanding when reading silently.	1	1.67
3	When I read silently, I can skip anything I think is too difficult or unimportant.	2	3.33
4	I read silently for pleasure, not for studying.	3	5
5	It helps me concentrate on what I am reading rather than the pronunciation of individual words.	2	3.33
Total		10	16.67

Table 8

The Students' Responses for Reasons behind Preferring Subvocalization

Number	Students' justifications	Frequency	Percentage
1	It helps me pronounce the words better.	5	8.33
2	I repeat the ideas as they are formed in my mind and learn better.	1	1.67
3	I hear my own sound, and it helps me remember the information.	2	3.33
4	I can concentrate better and have a better understanding of the text.	8	13.33
5	I use it to memorize and remember new vocabulary better.	4	6.67
Total		20	33.33

speed, subvocalization significantly enhances information retention. Nevertheless, the complexity associated with measuring and exploring this process has constrained research in this field.

The outcomes of the current study reveal that brief training in subvocalization results in comprehension performance comparable to that of reading aloud. However, conflicting results emerge from studies advocating for silent reading (e.g., Mendoza & Cruz, 2024; Schimmel & Ness, 2017) versus those favoring oral reading (e.g., Mott, 2019; Zolfagharkhani & Kowsary, 2013), with most research focusing solely on the benefits of one method without comparing all three. The discrepancies among these studies, including the current one, in comparing silent reading, oral reading, and subvocalization may arise from variations in participants' personalities or the context of test administration (McCallum et al., 2004). Scholarly discussions suggest that each of these methods may exert distinct effects on comprehension (Shahnaz & Kabir, 2022), potentially influenced by individuals' skill levels and proficiencies (Filderman, 2022). Additionally, factors such as informal literacy experiences (Evans et al., 2000) and cultural literacy norms (Nachmani, 2015) beyond the classroom may influence individuals' preferences for specific reading methods. Given the multitude of these variables, fully controlling their impact when examining the relationship between learners' comprehension performance and the utilized reading method becomes challenging.

Despite limitations such as the absence of comparative studies in this area and a restricted number of participants, the current study's findings do not diminish the obtained outcomes; instead, they stimulate further investigation and a more comprehensive exploration in this field. Based on these outcomes, current research suggests that advocating for one reading method over another may not be universally applicable, as the effectiveness of each method can vary depending on the context. For instance, oral reading may benefit younger learners, while adult learners may excel in oral reading under varying reading settings (Mellard et al., 2015). Conversely, for certain groups of students, subvocalization or silent reading might be the optimal method to enhance their comprehension performance. Therefore, when selecting a reading method, it is crucial to carefully consider the specific circumstances and needs of the individuals involved.

Reading Methods and Impulsive and Reflective Learners Performance

The investigation into optimal reading methods for both reflective and impulsive learners unveiled significant differences in comprehension performance. Impulsive learners exhibited their highest performance during oral reading, achieving a mean score of 3.04, whereas their lowest performance was evident during silent reading, with a mean score of 1.97. Similarly, reflective learners displayed their

best comprehension performance during oral reading, with a mean score of 4.53, and their lowest performance during silent reading, with a mean score of 4.13. Notably, the reflective group consistently outperformed the impulsive group across all three reading methods. While research on impulsivity/reflectivity and methods of reading comprehension, particularly subvocalization, remains limited, existing studies predominantly focus on the general comprehension performance of impulsive and reflective learners. Nonetheless, comparisons with previous studies, such as those conducted by Nisa et al. (2018) and Amiri and Mall-Amiri (2015), affirm the predictive role of reflectivity in enhancing reading comprehension.

Reflective learners are distinctly focused and demonstrate more tolerance of ambiguity and think before responding, as they have the desire to respond correctly. However, they are known for their delayed responses and decisions that eventually make it difficult for them to learn quickly. On the other hand, impulsive learners are faster readers who give a very rapid answer rather than the right one. They are globalized in their thinking process, and they can create a quick mental picture of patterns and objects or even outlines of lessons (Messer, 1976; Nisa et al., 2018).

The results of the current research reveal intriguing patterns in the performance of both reflective and impulsive groups across different reading methods. While both groups performed better during oral reading and struggled more with silent reading, the variation in mean scores for each group across the reading methods is noteworthy. The reflective group consistently achieved mean scores exceeding four across all three methods, with minimal variation, indicating a relatively high level of comprehension. In contrast, the impulsive group's mean scores displayed greater variability, ranging from 3.04 during oral reading to 1.97 during silent reading.

The consistent performance of the reflective group across various reading methods may be attributed to their inclination towards strategic processing and deep engagement with the material. Their reflective nature likely prompts them to employ diverse comprehension strategies, adapting flexibly to different reading contexts (McNamara, 2011). These findings suggest that reflective learners may derive benefits from all three reading methods. However, teachers may achieve better results with impulsive learners by emphasizing oral reading and subvocalization. Oral reading's interactive and auditory nature may engage impulsive learners more effectively, providing immediate feedback and stimulating their auditory processing skills. Similarly, subvocalization, with its internalized speech component, could offer impulsive learners a structured approach to processing information, potentially enhancing their comprehension abilities.

Providing appropriate feedback to encourage alternative problem-solving approaches is among the effective teaching strategies for impulsive learners (Rivera-Flores, 2015). By offering personalized feedback aimed at promoting deeper engagement with the material, teachers can steer impulsive readers towards more deliberate comprehension techniques. Through the implementation of diverse instructional modalities, such as visual aids and interactive discussions, educators can effectively engage impulsive learners and reinforce comprehension skills. The ultimate objective is to empower these learners to approach reading tasks with greater mindfulness and strategic thinking, enabling them to analyze, interpret, and synthesize textual information more effectively.

English Learners' Preferred Reading Method

The analysis of the written feedback revealed insights into the subjects' preferences regarding different reading methods. Results indicated that 50% of the students favored oral reading, believing it enhanced their comprehension of passages. In contrast, 33.33% and 16.67% of participants opted for subvocalization and silent reading, respectively. These preferences align with the outcomes of the reading tests, which highlighted the oral reading method's significant impact on students' comprehension performance.

In this study, students who favored oral reading (as indicated in Table 6) cited reasons such as improved pronunciation practice, enhanced comprehension, stress reduction, improved listening skills, and increased reading speed. These findings are consistent with prior research conducted by Al-shumaimeri (2011) and Rochman (2019). The predominance of oral reading in Iranian secondary schools, where students are most accustomed to this method (Sadeghi & Bidel Nikou, 2012), likely influenced their preference compared to silent and subvocalization readings which are rarely taught or practiced in classrooms.

Introducing and familiarizing students with the mentioned alternative reading methods could enhance their comprehension skills. Subvocalization, in particular, has been identified as a potent tool for improving comprehension (Carver, 1990; Daneman & Stainton, 1991). Although subvocalization is a common process among readers, it often remains unexplored due to its unobservable nature. Nevertheless, reinforcing this reading strategy could significantly improve reading comprehension performance (Daneman & Newson, 1992). Subvocalization, by silently pronouncing words as one reads, aids in the internalization of text, allowing readers to engage more deeply with the material. This active engagement facilitates better understanding and retention of information. Additionally, subvocalization serves as a form of self-monitoring, enabling readers to clarify meaning and detect errors as they read.

In addition, considering the outcomes of the present study and the differing effectiveness of each of the three mentioned reading methods on students with diverse educational and personal characteristics, it becomes evident that the introduction and utilization of less common reading methods in teaching can lead to significant changes in teaching practices and greatly enhance learning outcomes. This recognition underscores the importance of adopting a flexible and inclusive approach to reading instruction, one that acknowledges the varied needs and preferences of learners. By embracing alternative methods such as subvocalization, educators can create more tailored and effective learning experiences that cater to the individual strengths and challenges of their students. This proactive approach not only fosters a deeper understanding and appreciation for diverse reading strategies but also empowers students to become more confident and proficient readers in the long term.

CONCLUSION

The cognitive style of language learners can significantly impact their language learning process. Thus, the present study explored the relationship between impulsivity/reflectivity cognitive styles and reading comprehension performance across three reading methods: oral, silent, and subvocalization. The results revealed that oral reading, with the highest mean score, had a substantial positive impact on comprehension performance. However, the subvocalization method closely followed, and statistically, there was no significant difference between the two methods in their effectiveness. Moreover, reflective subjects outperformed impulsive ones across all three reading methods, with both groups achieving their highest mean scores with oral reading and their lowest with silent reading. Notably, oral read-

ing emerged as the most preferred method among participants.

These findings suggest that EFL teachers should adopt a flexible approach in selecting reading methods to enhance teaching activities. Recognizing that a one-size-fits-all approach may not cater to all learners' needs, teachers should provide opportunities for students to explore different reading methods aligned with their cognitive styles and learning objectives. Additionally, learners themselves can benefit from understanding their cognitive styles and preferred reading methods to enhance their reading performance and adapt their learning styles accordingly.

In conclusion, while these findings may have cultural or individual specificity, they underscore the need for greater flexibility in second/foreign language teaching methodologies. The current outcomes can guide future research in exploring additional aspects of the interaction between impulsivity/reflectivity and reading methods such as the cognitive processing strategies. Also, longitudinal studies can assess the long-term effects of specific reading methods particularly subvocalization and silent reading on language learning and academic achievement and comprehension performance for individuals with different cognitive styles. By building upon these insights, future research can refine instructional approaches to better meet the diverse needs of language learners.

DECLARATION OF COMPETITING INTEREST

None declared.

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APPENDIX

Eysenck's Impulsiveness Questionnaire (I.7) (Eysenck et al., 1985)

Instruction: Please answer each question by putting a circle around the 'Yes' or the 'No' following the questions. There are no right or wrong answers and no trick questions. Work quickly and do not think too long about the exact meaning of the question.

1.	Would you enjoy water skiing?	Yes	No
2.	Usually, do you prefer to stick to brands you know are reliable and try new ones on the chance of finding something better?	Yes	No
3.	Would you feel sorry for a lonely stranger?	Yes	No
4.	Do you quite enjoy taking risks?	Yes	No
5.	Do you often get emotionally involved with your friends' problems?	Yes	No
6.	Would you enjoy parachute jumping?	Yes	No
7.	Do you often buy things on impulse?	Yes	No
8.	Do unhappy people who are sorry for themselves irritate you?	Yes	No
9.	Do you generally do and say things without stopping to think?	Yes	No
10.	Are you inclined to get nervous when others around you seem to be nervous?	Yes	No
11.	Do you often get into a jam because you do things without thinking?	Yes	No
12.	Do you think hitch-hiking is too dangerous a way to travel?	Yes	No
13.	Do you find it silly for people to cry out of happiness?	Yes	No
14.	Do you like diving off the high board?	Yes	No
15.	Do people you with have a strong influence on your moods?	Yes	No
16.	Are you an impulsive person?	Yes	No
17.	Do you welcome new and exciting experiences and sensations, even if they are a little frightening and unconventional?	Yes	No
18.	Does it affect you very much when one of your friends seems upset?	Yes	No
19.	Do you usually think carefully before doing anything?	Yes	No
20.	Would you like to learn to fly an aeroplane?	Yes	No
21.	Do you ever get deeply involved with the feelings of a character in a film, play or novel?	Yes	No
22.	Do you often do things on the spur of the moment?	Yes	No
23.	Do you get very upset when you see someone cry?	Yes	No
24.	Do you sometimes find someone else's laughter catching?	Yes	No
25.	Do you mostly speak without thinking things out?	Yes	No
26.	Do you often get involved in things you later wish you could get out of?	Yes	No
27.	Do you get so carried away by new and exciting ideas, that you never think of possible snags?	Yes	No
28.	Do you find it hard to understand people who risk their necks climbing mountains?	Yes	No
29.	Can you make decisions without worrying about other people's feelings?	Yes	No
30.	Do you need to use a lot of self-control to keep out of trouble?	Yes	No
31.	Do you become more irritated than sympathetic when you see someone cry?	Yes	No
32.	Would you agree that almost everything enjoyable is illegal or immoral?	Yes	No
33.	Generally, do you prefer to enter cold sea water gradually, to diving or jumping straight in?	Yes	No

34.	Are you often surprised at people's reactions to what you do or say?	Yes	No
35.	Would you enjoy the sensation of skiing very fast down a high mountain slope?	Yes	No
36.	Do you like watching people open presents?	Yes	No
37.	Do you think an evening out is more successful if it is unplanned or arranged at the last moment?	Yes	No
38.	Would you like to go scuba diving?	Yes	No
39.	Would you find it very hard to break bad news to someone?	Yes	No
40.	Would you enjoy fast driving?	Yes	No
41.	Do you usually work quickly without bothering to check?	Yes	No
42.	Do you often change your interests?	Yes	No
43.	Before making up your mind, do you consider all the advantages and disadvantages?	Yes	No
45.	Can you get very interested in your friends' problems?	Yes	No
46.	Would you like to go pot-holing?	Yes	No
47.	Would you be put off a job involving quite a bit of danger?	Yes	No
48.	Do you prefer to 'sleep on it' before making decisions?	Yes	No
49.	When people shout at you, do you shout back?	Yes	No
50.	Do you feel sorry for very shy people?	Yes	No
51.	Are you happy when you are with a cheerful group and sad when the others are glum?	Yes	No
52.	Do you usually make up your mind quickly?	Yes	No
53.	Can you imagine what it must be like to be very lonely?	Yes	No
54.	Does it worry you when others are worrying and panicky?	Yes	No

Self-efficacy and Metacognition as the Mediated Effects of Growth Mindset on Academic Writing Performance

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ABSTRACT

Background: Various studies have highlighted the theoretical roles of growth mindset, self-efficacy, and metacognition in academic writing. However, the clarity regarding which variables act as mediators in this context remains underexplored.

Purpose: This study investigates how self-efficacy and metacognition mediate the effects of a growth mindset on academic writing performance among EFL students. It aims to clarify the mediating roles of these variables, directing the development of four research hypotheses and a conceptual model.

Method: The study employed a structural equation modelling (SEM) method using the PLS-SEM analysis. Participants included 464 EFL undergraduate students from 28 provinces in Indonesia, who were working on their theses. They completed a series of valid and reliable scales online.

Results: Analysis revealed that growth mindset significantly influences self-efficacy for ideation and metacognition. Further, self-efficacy in ideation, convention, and self-regulation, along with metacognition, effectively mediated the relationship between growth mindset and academic writing performance.

Conclusion: The findings suggest that growth mindset significantly impacts academic writing performance through its influence on self-efficacy and metacognition. This underscores the importance of these mediators in enhancing academic writing competence. Consequently, EFL writing lecturers and thesis supervisors should focus on interventions that strengthen these attributes. Future research should continue to explore effective strategies to enhance metacognition and self-efficacy, thereby contributing to the broader field of EFL education.

KEYWORDS

academic writing performance, EFL undergraduate thesis, growth mindset, metacognition, self-efficacy

INTRODUCTION

Academic writing involves in-depth scholarly discussion between a writer and readers, aimed at providing reliable information (Cahyono et al., 2024). For a writer, academic writing represents a logical and intellectual activity that involving the digestion and communication of information. Compared to other genres of writing, academic writing is more complicated due to its sequential processes of generating ideas, planning, creating ideational frameworks, drafting, editing, and revising (Csizér & Tankó, 2017). Among the crucial aspects in academic writing are the argumentation and logical reasoning (Aqeel et al., 2020; Latifi & Noroozi, 2021).

Defined as the presentation of statements with strong reasoning supported by valid evidence (Gorrostieta & López-López, 2016), argumentation is necessary to clearly explain concepts and persuade readers of the claims. Basically, argumentation is related to the social constructivist theory of meaning-making, which holds that in authentic activities, writers engage with contentious problems, adopt views, negotiate meaning, and become aware of the issues at stake

(Jonassen & Kim, 2010). Meanwhile, claims are meaningless unless they are supported by solid logical reasoning. Logical reasoning is what we might do before making an argument, and our argument shows some of our best reasoning (Govier, 2019). Thus, in the academic writing process, the writer defends their ideas using arguments, reasons, and evidence.

By using reasoning and argumentation skills, writers can critically analyze many aspects of the current issue and engage in in-depth cognitive processing of the course material. Based on Toulmin's widely used model of argumentation, there are six elements of argumentation namely claim, data, counterargument claim, counterargument data, rebuttal claim, and rebuttal data (Toulmin, 2003). These elements need to be considered in to produce high quality argumentative writing. However, literature has shown that students still find challenges in providing good quality writing due to their lack of argumentation knowledge and abilities to provide strong reasoning and logic in their arguments (Latifi & Noroozi, 2021; Shahsavar & Kourepaz, 2020).

The aforesaid challenges have resulted in teacher dissatisfaction with students' writing, especially when they come to the process of thesis writing (Gorrostieta & López-López, 2016). To enhance students' argumentative writing skill, strategies such as peer feedback have been proven effective by the previous studies (Latifi & Noroozi, 2021; Valero et al., 2019). Peer feedback allowed students to evaluate the quality of their peers' writing, identify areas needing improvement, and make recommendations for modifications, which in turn encourages them to participate in the learning process (Noroozi et al., 2016). Therefore, this strategy is also effective for university students' thesis writing. Among undergraduate students at the tertiary level, academic writing is usually connected to research-based writing or thesis writing, the final task they must complete to earn their bachelor's degrees (Weaver et al., 2016). This bachelor's thesis is regarded as a significant component of the curriculum since it requires that students locate pertinent materials, think critically, process complex information, apply scientific reasoning, and work independently. The six general components of a bachelor's thesis for undergraduate students in Indonesia typically include an introduction, literature review, methodology, findings and discussions, conclusion and suggestions, and references (Prihandoko et al., 2022). Each of these components has different moves (Moreno & Swales, 2018) that should be taken into account. In writing a bachelor's thesis, students are also required to develop the argumentation and logical reasoning in their introduction, literature review, results, and data discussion.

However, students frequently face difficulties which stem from inadequate or inconclusive data to support their arguments, a lack of understanding of academic writing styles, and inefficient compositions, especially in the areas of concept organization and language structures (Jonassen & Kim, 2010; Zaki & Yunus, 2015). Furthermore, the presentation and discussion of research data, which demands critical thinking skills, often cause students to struggle with rumination in academic writing. Therefore, students' ongoing and active participation in all stages of academic writing determine the quality of their written works (Altınmakas & Bayyurt, 2019). According to Guraya and Guraya (2017), the quality of students' academic writing is influenced by their proficiency in academic writing and their comprehension of research ethics.

Certain external elements, such as tutoring, supervisory interventions, and peer review, have been identified in previous studies as contributing to the improvement of students' academic writing performance. Adamson et al. (2019) conducted a study that emphasized the importance of supervisors' involvement in assisting students with theses-based academic writing. According to their study, critical elements that support students' academic writing performances include supervisors' roles, which involve scaffolding students, having ongoing conversations with them to help them deal with English and non-English resources, providing direct corrective and metalinguistic feedback, and helping students map their concepts. Research by Kuiken and Vedder (2020) found that the academic writing performances of students who have not reached the required level of proficiency can be improved by offering them a comprehensive remedial program. Miller and Pessoa (2016) argued for explicit instructions to help students organize their thoughts for writing effectively. Suen (2021) highlighted that an academic writing workshop can help students improve their academic writing performance. Writing approaches such as peer-feedback have also been proven to enhance students' abilities to build argumentation and logical reasoning. A study by Valero et al. (2019) showed that peer review enables students to improve students abilities to notice, diagnose, and resolve writing issues. Additionally, it allows students to broaden and deepen their analytical and critical thinking around the topic (Yang, 2010).

Beside external elements, the complex nature of academic writing necessitates strong internal elements. These internal components include the growth mindset, self-efficacy, and metacognition factors (Shen et al., 2020; Vincent et al., 2021). The first variable, growth mindset, refers to the idea that intelligence may be improved and developed with consistent effort. Truax (2018) discovered that the provisions of growth mindset feedback and objective evaluation increase students' motivation to write. Regarding second variable, self-efficacy, is a component of a person's motivational dimension and person's belief in their ability to generate or attain desired outcomes through hard work (Mitchell et al., 2021). Vincent et al. (2021) explained that increasing one's self-efficacy to write is a critical step toward improving one's writing performance. In respect of the third variable, metacognition is defined as students' awareness of their own mental activities and their competencies to reflect on and regulate their own knowledge and thinking skills for the

sake of achieving learning objectives (Karlen, 2017). As a higher-order cognitive activity, metacognition significantly impacts writing outcomes by teaching students how to develop and apply unique strategies for each stage of the writing process (Pitenoee & Modaberi, 2017).

Research on the variables of growth mindset, self-efficacy, metacognition, and academic writing performance has provided substantial knowledge and data on the potential interconnections between these factors. However, previous studies have typically investigated these variables in isolation rather than examining them collectively (Grenner et al., 2021; Howe & Wig, 2017). Some research has focused on two of these variables, such as metacognition in writing and self-efficacy in writing (Colognesi et al., 2020; Vincent et al., 2021). Other studies have explored the relationships between some of these four variables and additional external factors, such as writing metacognition in the context of online thesis supervision or the development of assessment tools (Chakma et al., 2021; Puryantoa et al., 2021).

To the best of our knowledge, no prior studies have conducted an exploratory investigation into the interplay among growth mindset, self-efficacy, metacognition, and academic writing performance while also identifying possible mediating variables. Furthermore, no similar research aimed at this objective has been found in the publications of Indonesian academics to date. Therefore, this study seeks to address this gap by exploring the interrelationships among growth mindset, self-efficacy, metacognition, and academic writing performance among Indonesian tertiary students working on undergraduate theses. Additionally, this research aims to highlight the potential mediating variables within the proposed model based on the exploratory study.

LITERATURE REVIEW

Growth Mindset

The nature of mindset is fluid in the sense that it can change and be controlled as desired (Truax, 2018). Hence, students may choose to have growth mindset in a specific domain to achieve optimal mastery or otherwise. Growth mindset is defined as the belief that intelligence can be developed and enhanced through hard work, and it is a strong predictor of learning (Lou & Noels, 2019). After evaluating their most recent learning outcomes, students' growth mindsets may drive their academic development by encouraging them to be more confident in their ability to study. The concept of growth mindset is vital to writing because the complexity of writing processes (e.g., planning, drafting, proofreading, and editing) can cause students to give up if they find those phases challenging. Students with growth mindset will see difficult writing processes as the stages of learning they

must engage in because growth mindset is proven to predict learners' belief in their learning process (Amalia et al., 2023). Moreover, Truax (2018) demonstrated that motivating talks and written comments from instructors may help students develop growth mindset. Furthermore, if students develop a growth mindset, they may direct their self-directed learning efforts toward improving their writing skills (Bai et al., 2020).

Self-Efficacy

Self-efficacy serves as a pivotal motivator for learning readiness (Hwang, 2020). It influences how students approach writing tasks, affecting their confidence and competence (Callinan et al., 2018). Writing self-efficacy, encompassing beliefs about one's capabilities in various writing skills and techniques, is essential for improving writing performance (Mitchell et al., 2017; Vincent et al., 2021). Bruning et al. (2013) broke down writing self-efficacy into three components: ideation, convention, and self-regulation. The first illustrates self-efficacy in terms of formulating and shaping the concepts, tenets, and logic that form the basis of written expression. The second illustrates self-efficacy in enhancing language skills, including the use of language, grammatical constructions, and discourse organization. The third, which involves assessments of the writer's linguistic and cognitive abilities, shows how effectively the writer manages their emotions and behavior. Empirical studies have linked high levels of self-efficacy with better writing skills, motivation, and performance (Sabti et al., 2019; Sun & Wang, 2020; Vincent et al., 2023). Additionally, Ardi et al. (2024) demonstrated a positive correlation between self-efficacy and enjoyment of writing.

Metacognition

Metacognition refers to awareness and control over one's cognitive processes, which is essential for effective learning (Wafubwa & Csíkos, 2020). In academic writing, metacognition helps students to strategize, monitor, and refine their writing methods, thereby enhancing their ability to construct solid arguments and coherent texts (Chen & Hapgood, 2021). It is a higher-order cognitive skill that significantly affects writing outcomes by helping students to tailor strategies for each phase of the writing process (Pitenoee & Modaberi, 2017; Sato & Lam, 2021). Strong metacognition enables learners to formulate persuasive arguments, engage in productive exchanges, and defend their opinions, all of which are required in writing (Teng et al., 2021). Additionally, students proficient in metacognitive skills can produce texts that meet genre expectations and reflect sophisticated understanding of the content and structure required (Aliyu et al., 2016; Escorcia & Ros, 2019). Recent studies have also connected metacognition with enhanced critical thinking in writing contexts (Teng & Yue, 2023).

Self-efficacy and Metacognition as the Mediating Predictors between Growth Mindsets and Academic Writing Performances

Many studies have demonstrated possible correlative patterns among growth mindset, self-efficacy, and metacognition, which can be used to explain similar patterns in the context of academic writing. According to Zander et al. (2018), high levels of self-efficacy are more common in those who have a growth mindset. According to Dweck (2012), self-efficacy in the context of writing is divided into three categories. These categories include self-efficacy for ideation, convention, and self-regulation. If interpreted and applied in the context of academic writing, the patterns demonstrated by Zander et al. (2018) and Dweck (2012) suggest that someone with growth mindset in academic writing will likely have high self-efficacy in academic writing. In other words, their growth mindset will enhance their self-efficacy in academic writing for ideation, convention, and self-regulation. The correlation between growth mindset and self-efficacy is further supported by a study conducted by Hass et al. (2016), demonstrating that the assessment of growth mindset as a research variable should include the theoretical constructs of self-efficacy. In the context of writing, Mitchell and McMillan (2018) demonstrated that those with low self-efficacy tend to have low writing performance, leading to the absence of engagement in writing programs. This suggests that self-efficacy in academic writing contributes to the enhancement of academic writing performance.

A growth mindset also correlates with metacognition. According to Bai and Wang (2020), a motivating variable, such as growth mindset, has been shown to significantly predict self-regulated learning whose theoretical constructs are linear to those of metacognition. This pattern suggests that a growth mindset in academic writing can enhance one's metacognition in academic writing. According to Escorcia and Ros (2019), written products that satisfy readers' expectations in terms of genre goals and material flow will be produced by students who are adept at applying metacognitive skills. They will also comprehend numerous characteristics and conceptual frameworks of excellent writing (Aliyu et al., 2016). These studies suggest that higher metacognition in academic writing leads to better academic writing performance.

The theoretical interactions among growth mindset, self-efficacy, and metacognition allow us to develop several hypotheses with self-efficacy and metacognition as the mediating variables between growth mindset and academic writing performance. No previous research in the field of undergraduate thesis academic writing has examined the comprehensive interrelationships among these variables and their sub-variables. To create comprehensive hypotheses, we consider the division of the academic writing self-efficacy variable into three sub-variables: ideation, convention, and self-regulation, as described by Yeager and Dweck (2012).

Thus, we propose four hypotheses to be scientifically examined. The proposed hypotheses for the study include both direct and specific indirect effects. The direct effects hypothesize that a growth mindset positively influences self-efficacy for ideation (H1) and metacognition (H2). For specific indirect effects, it is hypothesized that a growth mindset enhances self-efficacy for ideation, which in turn improves self-efficacy for self-regulation and self-efficacy for convention, ultimately leading to better academic writing performance (H3). Additionally, it is hypothesized that a growth mindset positively affects metacognition, which subsequently enhances academic writing performance (H4).

Figure 1

Conceptual Model
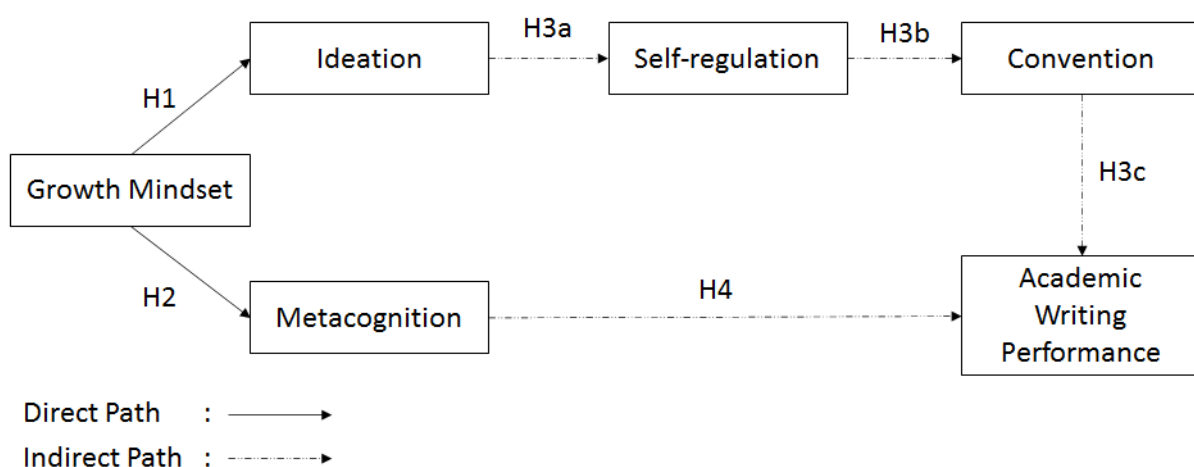
METHOD

Sample and Data Collection

Using a purposive sampling technique, this study involved seventh semester (and above) students who were writing their theses in the English departments of various universities in Indonesia. There were 464 student participants from 28 provinces, with ages ranging from 20 to 24 years. The data were obtained through a closed questionnaire distributed online via the Google Form in June 2021. A consent form detailing the nature of the study, its goals, the data collection method, respondents' rights, and the confidentiality and anonymity of the responses was included with the online questionnaire. Respondents could only access the questionnaire by moving to the next form step and giving their digital approval. The Google Form link was given to the heads of the English departments at the universities where the student participants studied English.

Measurement Scale

The measurement scale used in this study was adapted from existing instruments. There were six variables used to formulate the model. Growth mindset was used as an exogenous variable. This scale was adapted from Cooper et al. (2020), that contained 4 items. For the mediated variables, the writing self-efficacy scale was adapted from Bruning et al. (2013), and the metacognition scale was adapted from Karlen (2017). In detail, the writing self-efficacy scale was divided into three sub-variables: self-efficacy for ideation, convention, and self-regulation, with a total of 11 items. Meanwhile, the metacognition scale subsumed 5 items. Furthermore, as the endogenous variable, the academic writing performance scale was adapted from Iwasaki et al. (2019) and contained 5 items. For the purpose of scoring, we used five-point Likert scales ranging from 1 (very inappropriate) to 5 (very appropriate). The validity and reliability of the adopted instruments were tested before they were compiled into a questionnaire and distributed to the respondents. Face validation was the initial step, involving two professors of linguistics and English as a Foreign Language. The professors evaluated the contents of the instruments on a scale of 1 to 5. The results of face validation showed an average score of 4.4. Next, we conducted pilot testing involving 60 students majoring in English from the provinces of Central Java and Papua. The pilot testing results were analyzed to assess the reliability and validity scores using SPSS 23. The reliability test resulted in a Cronbach's Alpha of .823, which is categorized as a good degree of reliability. Subsequently, the validity test produced in the r scores ranging from .61 to .83. These scores exceeded the r-table of .138. This indicated that the questionnaire items were valid.

Data Analysis

To test the hypotheses, this study deployed PLS-SEM due to its suitability for a relatively small number of respondents with complex hypothesis modeling (Hair et al., 2014). Before testing the hypotheses, the PLS-SEM procedure involved model specification, outer model evaluation, and inner model evaluation. In the first stage, we constructed the inner and outer models and determined the exogenous and endogenous constructs. In the second stage, we conducted a factor analysis or outer model evaluation by computing composite reliability, convergent validity, and discriminant validity. In the third stage, the inner model evaluation was carried out using a collinearity test. The analysis proceeded to test the hypotheses by performing a path coefficient analysis.

RESULTS

In this study, we applied PLS-SEM to examine both the direct and indirect (mediated) relationships among growth mindset, writing self-efficacy (encompassing ideation, self-regulation, and convention), and metacognition, as well as their collective impact on the academic writing performance of EFL undergraduate students. The assessment of the measurement model yielded strong indicator loadings and composite reliability, validating the convergent validity of our constructs. Discriminant validity was also confirmed, indicating minimal overlap among the constructs. The evaluation of the structural model revealed no issues of multicollinearity, and the path analysis supported all the hypothesized relationships. Notably, it emphasized the significant positive effect (both direct and indirect) of growth mindset, mediated by writing self-efficacy and metacognition, on the academic writing performance at the undergraduate level, specifically in the context of thesis writing.

Based on the conceptual model (see Figure 2), growth mindset is an exogenous construct, and academic writing performance is an endogenous construct. Constructs acting as both exogenous and endogenous constructs are self-efficacy for ideation, self-efficacy for convention, self-efficacy for self-regulation, and metacognition. The designed model is called a reflective model. Through confirmatory factor analysis, we computed factor loading values to assess the feasibility of items related to the constructs. Based on the recommended minimum threshold of .50 (Hair et al., 2016), we eliminated one item within the construct of self-efficacy for self-regulation because the value of factor loading did not exceed the minimum threshold. After this elimination, the factor loading values of all constructs ranged from .644 to .865. This demonstrated that the factor loading benchmarks had been established.

After formulating the model, an outer model evaluation was conducted to examine the reliability and validity of each construct. The computation results can be seen in in Table 1.

Computations were performed to obtain the values of Cronbach's alpha, composite reliability, and average variance extracted (AVE). Construct reliability was assessed using internal consistency reliability with the recommended thresholds of Cronbach's alpha of > .7 (Njegić et al., 2020) and composite reliability of .7 - .95 (Hair et al., 2019). The computations showed that the values of Cronbach alpha ranged from .729 to .824, and the composite reliability values ranged from .828 to .886. These computations indicated that the reliability of indicators had been achieved. We subsequently examined the model's validity by computing convergent validity and discriminant validity. The benchmarks for convergent validity were the values obtained from the Average Variance Extracted (AVE) analysis (see Table 1). Based on the AVE re-

sults, the constructs' values ranged from .544 to .721, with a recommended threshold of .50 (Kline, 2015).

The outer model evaluation proceeded to conceptually ensure that the constructs did not overlap. To this end, we conducted a discriminant validity analysis to obtain the heterotrait-monotrait ratio (HTMT) value. To guarantee that each construct in the model differ conceptually from one another, the recommended threshold was < .85 (Henseler et al., 2015). Based on the analysis of discriminant validity (see Table 2), the HTMT results ranged from .424 to .775, demonstrating that discriminant validity had been achieved.

Furthermore, the last stage of analysis before testing the hypothesis was to perform a collinearity test to obtain the values of variance inflation factors (VIF). The threshold was < 3.3 (Hair et al., 2021; Kock, 2016). Based on the VIF computation (see Table 3), the obtained values ranged from 1.000 to 1.500. The values met the specified threshold requirements.
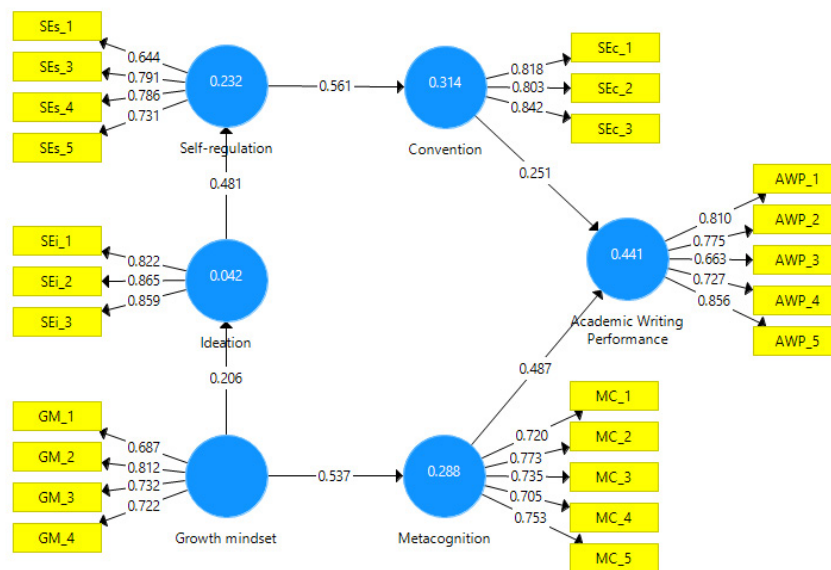
Figure 2

Confirmatory Factor Analysis Algorithm

Table 1

Construct Validity and Reliability

| Construct	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
AWP	0.824	0.823	0.878	0.592
Sec	0.759	0.763	0.861	0.675
GM	0.733	0.774	0.828	0.547
Sei	0.806	0.806	0.886	0.721
MC	0.791	0.796	0.856	0.544
SEs	0.729	0.748	0.828	0.548

Note. AWP (Academic writing performance); SEc (Self-efficacy for convention; GM (growth mindset); SEi (Self-efficacy for ideation); MC (Metacognition); SEs (Self-efficacy for self-regulation)

Table 2

Heterotrait-Monotrait-Ratio (HTMT)

AWP	AWP	SEc	GM	SEi	MC	SEs
SEc	0.669					
GM	0.633	0.424				
SEi	0.541	0.837	0.239			
MC	0.775	0.739	0.663	0.623		
SEs	0.611	0.736	0.472	0.605	0.751	

Note. AWP (Academic writing performance); SEc (Self-efficacy for convention; GM (growth mindset); SEi (Self-efficacy for ideation); MC (Metacognition); SEs (Self-efficacy for self-regulation)

Table 3

Variance Inflation Factor (VIF)

	AWP	SEc	GM	Sei	MC	SEs
AWP						
Sec	1.500					
GM				1.000	1.000	
Sei						1.000
MC	1.500					
SEs		1.000				

Note. AWP (Academic writing performance); SEc (Self-efficacy for convention; GM (growth mindset); SEi (Self-efficacy for ideation); MC (Metacognition); SEs (Self-efficacy for self-regulation)

Figure 3

Bootstrap Results for Path Analysis
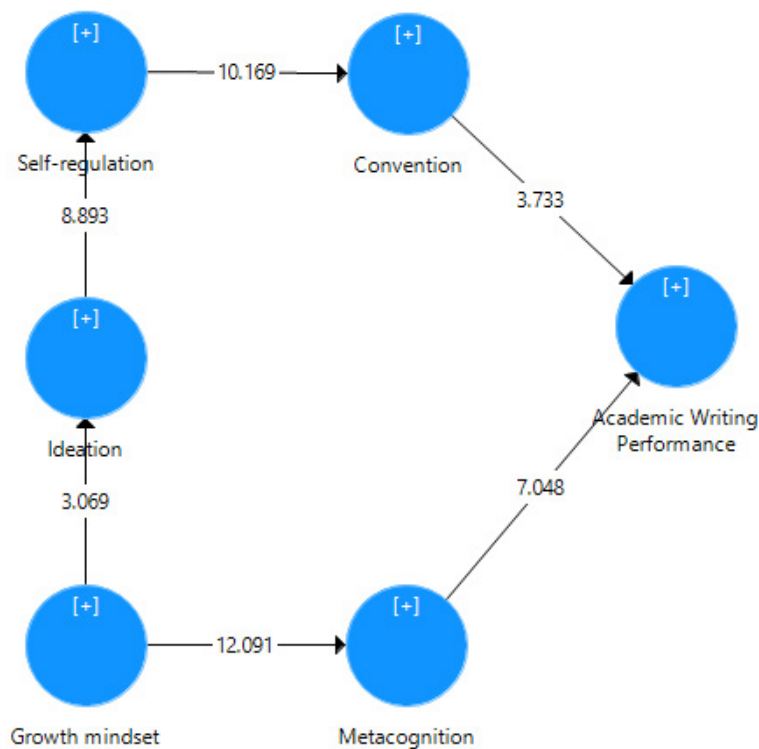
Thus, it could be concluded that there was no issue of multicollinearity in the model specification. The existence of multicollinearity could affect reliability and validity, leading to potential bias in the path significance test used to examine hypotheses (Hair et al., 2019; Kock, 2016).

The analysis continued to test the hypotheses using the path coefficient by performing the bootstrap procedure. The values of the standardized path coefficient (see Figure 3) showed that the relationships among constructs were generally strong and positive (+1) (Hair et al., 2021). We applied a significance level of 0.05 during bootstrapping so that the threshold of t-value for acceptable hypotheses was > 1.96 (Wong, 2013).

Referring to the threshold, it was worth declaring that the four hypotheses (see Table 4) were accepted. In detail, direct relationships existed between growth mindset and self-efficacy for ideation and between growth mindset and metacognition. These relationships were positively significant at (β = 0.206; $p < 0.05$; t = 3.069; supporting H1) and (β = 0.537; $p < 0.05$; t = 12.091; supporting H2). For the mediated effect, growth mindset (indirectly through self-efficacy for ideation, self-regulation, and convention) had a positive and significant relationship with academic writing performance at (β = 0.068; $p < 0.05$; t = 2.923; supporting H3). Finally, growth mindset through metacognition had an indirect, positive, and significant relationship with academic writing performance at (β = 0.261; $p < 0.05$; t = 6.003; supporting H4). Using a margin of error at 5%, we were confident about the significant and positive results of testing the hypotheses with a 95% confidence level.

DISCUSSION

Numerous empirical studies have examined the direct relationships among self-efficacy, metacognition, and academic writing performance (e.g., Bai et al., 2020; Bruning et al., 2013; Chakma et al., 2021; Grenner et al., 2021; Howe & Wig, 2017; Sultan & Moqbali, 2020; Vincent et al., 2021). However, there is a notable lack of research on how a growth mindset, indirectly through self-efficacy and metacognition, can impact academic writing performance. Additionally, research focusing on academic writing performance among undergraduate students in EFL (English as a Foreign Language) countries remains insufficient. Therefore, this study aims to address these gaps.

The study presents four key findings. First, the participants indicated that a growth mindset positively affected their self-efficacy for ideation. Second, it was evident that the participants' growth mindset influenced their metacognitive strategies in writing. Third, three types of writing self-efficacy - self-efficacy for ideation, convention, and self-regulation - mediated the relationship between growth mindset and academic writing performance. Fourth, metacognition also mediated the relationship between growth mindset and academic writing performance.

These findings provide a comprehensive understanding that enhancing academic writing competence, particularly in the context of EFL undergraduate theses, begins with students' beliefs in the value of their learning investments in writing. Over time, these beliefs shape their confidence in generating ideas, using proper English, managing behavior and decisions, and employing controlled strategies during writing. This continuum ultimately leads to improved academic writing performance.

Growth Mindset Affected Students' Self-Efficacy for Ideation

This study demonstrated a direct, positive, and significant relationship between growth mindset and self-efficacy for ideation (β = 0.206, p = 0.002). This finding indicates that students' beliefs in their persistent learning investments (Bai & Guo, 2018) contribute to their increasing confidence in generating ideas during writing. The process of idea generation in writing involves prolonged and continuous cognitive activities, which are associated with competencies such as reading resources, mapping the information read, co-constructing a mental map between newly acquired information and pre-existing knowledge, and translating the prod-

Table 4

Results of Paths Analysis

	Path	Beta Value	Std. Error	t- Value	*p*- Values	Results
			Direct Effects			
H1	GM -> SEi	0.206	0.065	3.069	0.002	Supported
H2	GM -> MC	0.537	0.045	12.091	0.000	Supported
			Specific Indirect Effects			
H3	GM -> SEi -> SEs -> SEc -> AWP	0.068	0.023	2.923	0.004	Supported
H4	GM -> MC -> AWP	0.261	0.044	6.003	0.000	Supported

Note. AWP (Academic writing performance); SEc (Self-efficacy for convention; GM (growth mindset); SEi (Self-efficacy for ideation); MC (Metacognition); SEs (Self-efficacy for self-regulation)

ucts of idea mapping into coherent written words (Crossley et al., 2016). This study specifically suggests that students' confidence in these processes of idea generation is influenced by the extent of their growth mindset.

Previous studies have addressed similar issues, highlighting the influence of a growth mindset on writing self-efficacy (Bai et al., 2020; Zander et al., 2018). However, those studies viewed writing self-efficacy as a single variable. In contrast, the present study categorizes writing self-efficacy into three domains: ideation, convention, and self-regulation. By examining writing self-efficacy in greater detail, this study underscores the contribution of a growth mindset to writing self-efficacy for ideation.

Growth Mindset Influenced Students' Metacognition in Writing

Further data analysis reveals that students' growth mindset had a direct, positive, and significant impact on metacognition in writing (β = 0.537, p = 0.000). This result means that students' beliefs in the strengths of their persistent learning investments (Bai & Guo, 2018) lead to their effective control over writing knowledge, strategies, and management (Sultan & Moqbali, 2020). In the discourse of writing metacognition, Briesmaster (2017) elucidated that both knowledge of cognition and cognition regulation in writing act as a problem-solving competence for students to cope with the complexities of writing. The present study confirms Bai and Wang's (2020) finding that motivation variable, such as growth mindset, significantly predicts the enhancement of self-regulated learning, whose theoretical components align with those of metacognition.

Writing Self-Efficacy Mediated the Relationship between Growth Mindset and Academic Writing Performance.

Furthermore, three types of writing self-efficacy, i.e., self-efficacy for ideation, convention, and self-regulation, mediated the relationship between growth mindset and academic writing performance (β = 0.068, p = 0.004). The aforesaid mediating variables rest upon the categories in Bruning's et al. (2013) theory on the interplay among writing self-efficacy for ideation, convention, and self-regulation. Thus, the present study's data on these mediating variables are also correlative in nature. It indicates that students' confidence in their skills, strategies, and insights for generating and refining ideas while writing affected their confidence in using all the tools available to them for academic writing, such as vocabulary, grammar, mechanics, language features, morphological awareness, and genres. Subsequently, their confidence in using academic writing tools backed up their confidence in control over writing knowledge and strategies.

The interplay among writing self-efficacy for ideation, convention, and self-regulation in writing has also been highlighted by other studies. For instance, Crossley et al. (2016) found that the usages of linguistic aspects in writing, such as difficult words, various units of words, non-repetitive terms, and semantic understanding, are triggered by the quality of idea generation. According to their findings, students who are good at generating ideas during writing are also good at using language patterns referred to by Bruning et al. (2013) as writing convention. Writing self-efficacy is not a static. It is something fluid that can also be improved through strategic practices with good management (Mitchell et al., 2017). Thus, the quality of writing convention triggered by idea generation should be maintained by good self-regulated learning. The present study's third result explains that students' beliefs in the power of learning investments (Bai & Guo, 2018) may contribute to their academic writing performance if they have sufficient writing self-efficacy for ideation, convention, and self-regulation.

Metacognition Mediated the Connection between Growth Mindset and Academic Writing Performance.

The fourth result of this study showed that metacognition mediated the connection between growth mindset and academic writing performance (β = 0.261, p = 0.000). It means that students' beliefs in the power of learning investment (Bai & Guo, 2018) may contribute to their academic writing performance if the students have effective control over writing knowledge, strategies, and management (Sultan & Moqbali, 2020). The current study, which examines the relationship between metacognition and academic writing performance, confirms earlier research showing that students with sufficient metacognitive abilities can produce written works that meet readers' expectations in terms of genre goals and written content flow (Escorcia & Ros, 2019). Additionally, they will understand the various traits and theoretical underpinnings of excellent writing (Aliyu et al., 2016).

The significance of writing self-efficacy and metacognition as mediators enhancing the relationship between growth mindset and academic writing performance cannot be overstated. This mediation offers meaningful insights for EFL writing instructors and thesis supervisors. It is crucial for educators to assess students' levels of growth mindset and actively encourage its development through motivational input. Additionally, they should implement specific learning interventions aimed at boosting students' self-efficacy and metacognitive abilities.

Prior research has highlighted various effective interventions for enhancing writing self-efficacy. These include a self-efficacy intervention incorporating psychological el-

ements from cognitive behavioral therapy (Daniels et al., 2020), wiki-collaborative writing intervention (Rahimi & Fathi, 2021), the use of computer-based self-efficacy feedback (Sherafati & Mahmoudi Largani, 2022), team-based learning (Zha et al., 2021), and self-efficacy-based written corrective feedback (Tsao, 2021).

Regarding metacognition in writing, several studies have demonstrated effective interventions. These interventions include the use of reflective writing journals to foster deeper self-reflection (Loughlin & Griffith, 2020; Ramadhanti et al., 2020), the integration of active learning and metacognitive feedback (Zhang & Li, 2021), web-based instructional strategies (Arroyo González et al., 2021), metacognitive support groups (Teng, 2020), cooperative–metacognitive instructional approach (Teng, 2020), mobile-assisted language learning tools (Kessler, 2021), metacognitive prompts to enhance awareness (Teng, 2021), and the flipped classroom model to invert traditional learning environments (Kansızoğlu & Bayrak Cömert, 2020).

These interventions are supported by scientific research and offer vicarious experiences that can significantly aid EFL writing instructors and thesis supervisors in helping students enhance their writing self-efficacy and metacognition. Employing such interventions can foster an ideal correlation between growth mindset and superior academic writing performance.

Limitations

The current study is not free from limitation. Although this study could reach student participants from 28 provinces in Indonesia, the total number of participants who were willing to take part were only 464 EFL students. The covid-19 situation hindered us to distribute the study's instrument directly to students, so the instrument was distributed online with limited control. If the instrument had been distributed offline, we could have managed to reach more participants. A greater number of participants might reveal different results. However, with such limitation, we had made serious efforts in data analysis to reduce bias. We used PLS-SEM program to obtain accurate results of data analysis. In addition, this study dominantly worked on the aspects of students' psychological and working competences in the context of academic writing performances. Such competences are growth mindset, self-efficacy, and metacognition. However, it is crucial to emphasize that this study did not work in-depth on detailed and specific skills of academic writing, such as the areas of assessing students' argumentation abilities and critical reasoning skills. The foregoing areas, argumentation abilities and critical reasoning skills, are the voids that further studies could surf scientifically. Further studies working on the foregoing voids will serve more knowledge

for academicians and readers who are consistently interested in the issue of academic writing.

CONCLUSION

This study aimed to explore the interplay among growth mindset, self-efficacy, metacognition, and academic writing performance, highlighting possible mediating variables. The findings demonstrate that a growth mindset directly and positively influences self-efficacy for ideation and metacognition, which subsequently enhance academic writing performance. These findings contribute to a meaningful conception that the enhancement of academic writing competence, in the context of EFL undergraduate theses, is initiated by students' beliefs in the power of their learning investments in writing. Over time, such beliefs in learning investments shape their confidence in generating ideas, using good English, managing behavior and decisions, and using controlled strategies during writing. This continuum results in the improvement of their academic writing performance. Specifically, this study reveals that three types of writing self-efficacy (ideation, convention, and self-regulation) mediate the relationship between growth mindset and academic writing performance. The results of this study are well-expected and not only support the proposed hypotheses but also demonstrate that a growth mindset significantly impacts self-efficacy and academic writing performance through the hypothesized pathways. This indicates that the study has successfully achieved its objectives and provides strong empirical evidence of the influence of a growth mindset in the investigated context. These findings contribute new insights and reinforce existing theories on the relationship between growth mindset, self-efficacy, metacognition, and academic writing performance. These results can be used to design educational interventions focused on developing a growth mindset to enhance students' self-efficacy and academic writing performance.

Further studies are expected to conduct experimentations by testing various interventions potential to boost students' self-efficacy and metacognition, especially in the context of EFL undergraduate theses. Such studies will be useful as vicarious experiences for educators majored in EFL education. Also, since the present study did not specifically focus on the areas of argumentation abilities and critical reasoning skills as some internal parts of academic writing skills, it is recommended that future studies probe these areas. Research-based data on students' argumentation abilities and critical reasoning skills can serve as the basis for developing relevant techniques or strategies which can be adopted by academic writing teachers to help students boost their academic writing competence.

ACKNOWLEDGMENTS

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Lastika Ary Prihandoko: Conceptualization; Data curation; Formal analysis; Methodology; Project administration; Resources; Software; Writing – original draft; Writing – review & editing.

Ruly Morganna: Conceptualization; Investigation; Methodology; Validation; Writing – original draft; Writing – review & editing.

Suci Nugrah Amalia: Conceptualization; Methodology; Supervision; Validation; Writing – original draft; Writing – review & editing.

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Scrutinizing the Relationship between Vietnamese English Majors' Intrinsic Motivation and Perceptions Towards Five Components of the 5Ts Framework

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ABSTRACT

Background: Intrinsic motivation (IM) is not far from a new research topic in English teaching. However, the relationship between this learning construct and the 5Ts framework, proposed by Renandya (2014) as a teacher-induced motivational agent, has not been explored.

Purpose: This work scrutinised the relationship between IM and perceptions towards five components of the 5Ts framework in an attempt to provide a simple means for effective teaching.

Method: 110 English majors responded to a self-questionnaire containing two scales measuring IM and perceptions towards the 5Ts as a motivational agent. Besides descriptive statistics and Cronbach's alpha, the present study employed other necessary techniques, such as Pearson's correlation and regression, to analyse the obtained data to draw results which had pedagogical implications.

Results: The research questionnaire reached acceptable reliability, and the students expressed positive levels of IM and perceptions of the 5Ts framework. The results also revealed a positive relationship between these two variables, and students' perceptions of the 5Ts components predicted their IM.

Conclusion: The findings support the hypothesis that the 5Ts framework enhances motivation. In addition, the teacher might need an added approach to enhance the learning motivation in the students with low levels, parallel with the 5Ts implementation for the entire class.

KEYWORDS

English majors, intrinsic motivation, 5Ts framework, relationship

INTRODUCTION

In the language learning field, the concept of motivation refers to the driving force that moves a learner "to make certain choices, to engage in action, to expend effort and persist in action" during the learning process of the target language (Dörnyei & Ushioda, 2011, p. 3). Learning motivation is far from a new research subject, having attracted attention in language learning since 1959, with the first phase known as the social-psychological period (Dörnyei, 2005). Gardner and Lambert (1959) showed that learners' intensity of motivation served as a predictor for language acquisition. Since then, the research on motivation in learning a language, especially English as a foreign language (EFL), has been overwhelming. In recent years, this subject has still drawn the interest of many researchers, demonstrated by a substantial number of published articles (e.g., Cheng & Cheng, 2013; Aldosari, 2014; Jodaei et al., 2018; Lei & Levitan, 2020; Meng, 2021; Javidkar et al., 2022; Waluyo & Bakoko, 2022; Ali et al., 2023; Siekmann et al., 2023; Nizigama et al., 2023). Vietnamese EFL students' motivation and its related aspects are no exception. In recent years, a significant number of papers dealing with Vietnamese EFL learners' motivation has been published both in national and international journals (e.g., Tran, 2007; Tran & Baldauf, 2007; Vu & Rochelle, 2015; Tuyen & Dan, 2016; Ngo et al., 2017; Doan, 2020; Nguyen & Habók, 2021). However, there is a lack of reports on the predictive role of intrin-

sic motivation from the student's perspective towards the teacher-related factors, including teacher immediacy behaviour, teaching methodology, course task, text, and test as a whole.

Renandya (2014) introduced a 5Ts motivational framework of classroom-related factors that can motivate students to learn the target language. The 5Ts focused on the motivation-influencing elements induced by the teacher named Teacher, Teaching method, Text, Task, and Test. To motivate the students in their English learning, the teacher should show a friendly appearance in class, select effective teaching methods, and choose appropriate text, tasks, and tests for the English course. As many teacher-related factors can make a classroom environment motivating or demotivating (e.g., Lamb, 2017; Quadir, 2017), Wang and Lee (2019) surveyed EFL teachers' and their students' perceptions of Renandya (2014)'s 5Ts and found a minus difference between the two. While teachers and students agreed on the role of Teaching Methodology, Text, and Test components, they had different opinions on the remaining two.

Teacher-related factors such as teacher immediacy, teacher-student rapport, the way of error correction, and teaching methods affect EFL students' motivation (e.g., Hsu et al., 2007; Gol et al., 2014; Cai, 2021; Song et al., 2022; Alrabai, 2022). It is reasonable that the 5Ts framework, as a teacher-induced factor, affects the students' learning motivation during the language course. The extent to which this framework influences L2 learners' intrinsic motivation appears to be an attractive research topic. However, it remains under-researched. For this reason, the current study aims to address this gap by examining the relationship between Vietnamese English-major students' intrinsic motivation and their perceptions towards five components of the 5Ts framework. Hopefully, its findings might provide concerned teachers with an option to improve students' motivation in the English learning classroom. Hypothesizing an association between the student's intrinsic motivation and perceptions of the 5Ts, this work aimed to answer the following research questions:

(1) What is Vietnamese English-major students' intrinsic motivation?
(2) What are their perceptions of the 5Ts?
(3) Does students' intrinsic motivation relate to and predict their perceptions of the 5Ts?

LITERATURE REVIEW

Motivation as a Driving Force

Self-determination theory (SDT) deals with human motivation and personality while stressing the vital role of resources inside human beings (Deci & Ryan, 1985; Ryan et al., 1997). Among many reviews, McEown and Oga-Baldwin (2019) recently wrote a comprehensive article about SDT summarizing its five basic sub-theories and the applications for all language learning research, especially English. The discussed sub-theories included cognitive evaluation, organismic integration, basic psychological needs, goal contents, and causality orientations. These two authors did not consider the relationships motivation theory, which was also an SDT mini-theory since they believed its association with language learning was not crucial in the traditional classroom environment.

The above-mentioned inside-human-being resources are basic psychological needs of autonomy, competence, and relatedness. Autonomy relates to a sense of choice and taking personal responsibility for the entire task (Ryan & Deci, 2017). In other words, this concept is about the learner her-/himself choosing appropriate learning strategies to gain the target language proficiency. Competence concerns learners' belief that their actions will result in the desired outcome (Deci & Ryan, 2002). The third basic need, relatedness, refers to a learner's desire to have a good connection with classmates and teachers (Grolnick & Ryan, 1989; Furrer & Skinner, 2003). Not to mention amotivation, which concerns the feeling of no desire to do learning activities, students' motivation consists of intrinsic and extrinsic (Ryan & Deci, 2000, 2017). Intrinsic motivation relates to a student's interest, enjoyment, and satisfaction in doing learning activities. Meanwhile, extrinsic refers to performing learning activities for goals such as receiving material rewards, praise, and respect or to avoid unwanted outcomes.

Enhancing Motivation in English Learning

During its history, the research on motivation in English language learning has resulted in a great deal of work, including improving learning motivation (e.g., Tagaki, 2003), enthusiastically joining classroom activities (e.g., Dam & Legenhausen, 1996), and effectively enhancing students' autonomy in and out of the classroom (e.g., Stephenson & Kohyama, 2003; Benson, 2006). For the work since 2005, Boo et al. (2015) have reviewed a substantial amount of L2 motivation research from 2005-2014, analysing 416 published research articles and book chapters to elucidate the changing environment of L2 motivation studies and project potential research directions of this field. These studies remarked on the rapid increase in the number of works, the shifting in nature investigations, the diversification of demographics of study subjects and the L2 involved.

Speaking of practice using motivational agents, recently, some researchers focused on empirical studies based on the motivational potential of the L2 teaching approach by applying new technology. Although they employed different technical tools, these investigations drew out a similar finding that appropriate applications of new techniques as assistant means helped improve L2 learners' motivation. For example, Teeter (2017), utilizing mobile-assisted language

learning (MALL) technology for 1001 Japanese EFL under-graduates, demonstrated that MALL helped improve several learning constructs, such as linguistic confidence, interest in English, and ideal L2 self. He believed that MALL was responsible for that improvement as it increased the opportunities for the students to communicate in English. Using other new techniques, such as game-based learning (Tsai et al., 2017), specific YouTube sites (Tokada, 2020), and ChatGPT (Ali et al., 2023) also allowed teachers to enhance students' motivation to study English. However, some researchers also pointed out that some factors, such as unfamiliar vocabulary, difficulty level, and listening difficulty, might demotivate learners at the same time.

5Ts Framework as a Motivating Agent in the English Classroom

Considering the importance of teacher-related factors in motivating students to learn English, Renandya (2014) developed a framework known as the 5Ts framework for the teacher to carry out their job effectively in the classroom context. The word T in 5Ts stands for these five components of the Teacher him-/herself, the Teaching methods applied, the Task designed for the course, including the teacher's guidance and instruction, the Text involving those selected by both the teachers and the students, and the Test for assessing each learning activities as well as the entire learning process. The Test is not just an exam at the end of the learning course but a multi-step evaluation from start to finish. According to Renandya (2014), the teacher's characteristics, such as being caring, supportive, humorous, enthusiastic, helpful, and committed, to name just a few, had an impact on the student's motivation (e.g., Borg, 2008; Brown, 2012; Dörnyei, 2001; Miller, 2012). A variety of teaching methods (Asher, 1977; Farrell, 2006), course tasks (Day & Bamford, 1998; Feather, 1982), texts (Grabe, 2009; Jacobs & Farrell, 2012), and tests (Jacobs & Farrell, 2003; McTighe & O' Connor, 2005) also influenced the student's learning motivation.

Teachers can use Renandya's 5Ts framework as a motivational strategy to enhance their students' motivation in English learning. However, equally implementing all its five components seems unpractical and less effective. In an attempt to point out which components were the most important for priority in practice, Wang and Lee (2019) evaluated teachers' and students' perceptions of the 5Ts and compared these two sets of data. To make this framework more helpful in selecting effective teaching, perhaps the relationship between the 5Ts and students' motivation is indispensable. However, so far, no such empirical studies have been conducted.

METHOD

Participants

The participants in this work were English-majored students at a private university in Vietnam. There were 110 students in the Faculty of Foreign Languages, including 61 third-year (55.5%) and 49 fourth-year (45.5%). Among the sample, there were 30 males (27.3%) and 80 females (72.7%). The participants have been learning English for ten years (third-year students) or eleven years (fourth-year students). In the university, they have received many courses required by the bachelor program of English Studies, including English Pronunciation Practice, English Grammar 1 & 2, Listening 1 & 2, Speaking 1 & 2, Reading 1 & 2, Writing 1 & 2, Linguistics 1 & 2, English Speaking World, British - American Culture, English - Vietnamese Translation.

Recruitment

This study assumed students who had experienced many courses with different teachers in English learning were crucial since they might compare one English course to another and realize what they need from the teachers to motivate them. With that in mind, the researcher invited 124 third- and fourth-year students majoring in English to join this study. Of that number, 110 students voluntarily took part in the present work.

Instruments

This study employed a Likert-type scale questionnaire comprised of two sections. The first was to collect the responses from the participants for intrinsic motivation. For this section, the present work chose the scale developed by Noels et al. (2003) and successfully adopted by Wang and Lee (2019). This scale consisted of only four items but reflected three main aspects of intrinsic motivation: knowledge, stimulation, and accomplishment. The author changed the word 'second language' in the original statements to 'English' to fit the study context. The four items of intrinsic motivation were as follows:

(1) I enjoy acquiring knowledge about the English community and their way of life.
(2) I have the pleasure of hearing the English language spoken by English.
(3) I experience the satisfaction of accomplishing difficult exercises in the English language.
(4) I enjoy surpassing my previous limits in my English language studies.

The second section was for the students' responses to 20 items of the 5Ts framework scale. These 20 items for five components of the 5Ts were developed by Renandya (2014) and modified by Wang and Lee (2019). Some of these statements are shown below:

I am motivated when my English teacher…

(1) Creates a low-stress classroom environment so I can participate without fear of losing face when I make mistakes.

(2) Uses a variety of activities to keep me interested and engaged.
(3) Encourages every student to be involved in the task.

The participants scored each claim by selecting one of the five alternative answers from 5 (strongly agree) to 1 (strongly disagree). The author translated the item statements into Vietnamese in advance to avoid misunderstanding their meaning.

Data Collection

The participants helped answer a questionnaire for about fifteen minutes in the classroom. Before doing that, the author explained to them every single item, answered all their related questions, and assured them that their responses would not affect the assessment of any learning course in their study program and be confidentially used only for research purposes. The participants were asked for their consent once again before answering the questionnaire. The participants were asked for their consent once again before answering the questionnaire. Then, the participants received the questionnaire sheet for their answers with a pen. Although the researcher set no time limitation, the students completed the answering in about twelve minutes.

Data Analyses

This work analysed the questionnaire responses first by Cronbach's alpha and descriptive statistics. The Cronbach's alpha examined the scale reliability and the descriptive statistics to describe the student's intrinsic motivation and perceptions of the 5Ts framework. Then, the study conducted Pearson's correlation test to investigate possible correlations between intrinsic motivation and each component of the 5Ts. Based on the result of Pearson's correlation test,

the study finally performed regression analysis using the students' perceptions of the 5Ts components as predictors of their intrinsic motivation.

RESULTS

Reliability Analysis

Cronbach's alpha analysis of the whole questionnaire resulted in $\alpha = 0.879$, supporting acceptable reliability for the questionnaire used in this study. Separately, the employed intrinsic motivation scale and the 5Ts framework scale also reached comparable reliabilities with α-values of 0.794 and 0.861, respectively.

Students' Intrinsic Motivation

The descriptive statistics of four items regarding the student's intrinsic motivation can be seen in Table 1. Accordingly, the respondents showed a high level of intrinsic motivation in learning English with a favourable mean value of 4.30, and 88.9% of them chose a strongly agree- or agree-response to the four items. Among the four items, "I enjoy surpassing my previous limits in my English language studies" of the Intrinsic accomplishment dimension received the highest mean score of 4.35. The remaining statement of this dimension and the intrinsic stimulation, "I have the pleasure of hearing the English language spoken by English", got the lowest mean score of 4.28.

Students' Perceptions of the 5Ts

The participants expressed favourable responses to 20 5Ts statements, as shown in Table 2. The respondents probably felt that all five components of the 5Ts were crucial to im-

Table 1

Students' Perceptions Towards Intrinsic Motivation

Statement[a]	SD & D[b] (%)	Neutral[b] (%)	A & SA[b] (%)	M[b]	S.D.
Intrinsic knowledge					
(1) I enjoy acquiring knowledge about the English community and their way of life.	0.9	10.0	89.1	4.29	.682
Intrinsic stimulation					
(2) I have the pleasure of hearing the English language spoken by English.	3.6	10.9	85.5	4.28	.836
Intrinsic accomplishment					
(3) I experience the satisfaction of accomplishing difficult exercises in English language.	0.9	9.1	90.0	4.28	.706
(4) I enjoy surpassing my previous limits in my English language studies.	0.9	8.1	91.0	4.35	.710
Overall- Intrinsic motivation:	**1.6**	**9.5**	**88.9**	**4.30**	**.733**

Note. [a] Modified statements of those developed by Noels et al. (2003) and adopted by Wang and Lee (2019). [b] Sample size N = 110; 1 = Strongly disagree (SD), 2 = Disagree (D), 3 = Neutral, 4 = Agree (A), and 5 = Strongly agree (SA).

proving their learning motivation, with mean values of 20 items in the range of 4.07-4.55. They showed the order of importance as Teacher (M = 4.33) > Teaching methodology (M = 4.13) > Task (M = 4.08) > Test (M = 4.01) > Text (M = 3.98). The top three places went to the following items of the Teacher component: "English teacher is friendly and approachable. I can talk to her not only about school work but also about other things related to my personal and social life" (M = 4.39), "English teacher creates a low-stress classroom environment so I can participate without fear of losing face when I make mistakes" (M = 36), and "English teacher loves the subject matter and teaches it with passion" (M = 4.35). Meanwhile, the statement "The texts used in the class do not contain too many words or expressions that are beyond my reach" of the Text constituent received the lowest mean score of 3.69.

Table 2

Students' Perceptions Towards Teacher-Related 5Ts Framework

Statement[a] : I am motivated to learn English when…	M[b]	S.D.
1. Teacher	4.33	.502
(1) my English teacher is friendly and approachable. I can talk to her not only about school work but also other things related to my personal and social life.	4.39	.705
(3) my English teacher creates a low-stress classroom environment so I can participate without fear of losing face when I make mistakes.	4.36	.617
(2) my English teacher loves the subject matter and teaches it with passion.	4.35	.711
(4) my English teacher treats every student fairly and does not practice favouritism.	4.22	.932
2. Teaching methods	4.13	.514
(9) my English teacher uses different teaching aids such as images, videos, songs and movements.	4.23	.738
(10) my English teacher uses a variety of activities to keep me interested and engaged.	4.22	.771
(11) my English teacher carefully selects and structures learning activities that support the attainment of lesson objectives.	4.05	.764
(12) my English teacher signals clearly when we are moving from one activity to another.	4.00	.790
3. Task	4.08	.493
(5) my English teacher provides sufficient assistance before, during and after the task.	4.23	.712
(6) my English teacher encourages every student to be involved in the task.	4.09	.671
(7) my English teacher explains the linguistic, communicative or cultural value of the task clearly.	4.05	.907
(8) the teacher assigns us tasks which meet our different needs and interests.	3.93	.809
4. Test	4.01	.512
(13) the teacher can provide feedback, guidance and advice to me and assess me on an on-going basis, rather than concentrating on a single day, week or end of the term.	4.32	.753
(14) my English teacher uses marking rubrics that are carefully calibrated to avoid subjectivity.	4.06	.870
(15) my English teacher allows us to assess ourselves.	3.88	.821
(16) the teacher gives me alternative assessments such as project work and other activities in the classroom, besides the examination.	3.76	.777
5. Text	3.98	.516
(17) teaching and instructional materials are varied, including print, electronic, oral & written ones.	4.16	.736
(18) the materials used in class provide ample opportunity for me to learn what we really need or want to learn.	4.07	.809
(19) my teacher allows us to choose reading materials that we are interested in.	3.99	.796
(20) the texts used in the class do not contain too many words or expressions that are beyond my reach.	3.69	.965

Note. [a] Statements were developed by Renandya (2014) and adapted by Wang and Lee (2019).

[b] Sample size N = 110; 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree.

Pearson's Correlation and Regression Analysis

The results of the Pearson's correlation analysis are shown in Table 3. The student's intrinsic motivation positively correlated with their perceptions of all five components of 5Ts, with coefficient values in the range of 0.355-0.428. All Pearson correlation coefficients were positive and moderate. That means the student's intrinsic motivation and perceptions of the five components of the 5Ts framework were in the same direction and correlated in medium strength.

The result of Pearson's correlation test (Table 3) allowed this study to perform a simple regression analysis using the participants' perceptions of 5Ts components as predictors of their intrinsic motivation. The result of this performance is presented in Table 4. The standardized residual histograms of five dependent variables, namely five components of the 5Ts, showed all the means were nearly zero, and the standard deviations were 0.995. Despite being slightly skewed, they were not hugely deviated from a normal distribution. The students' intrinsic motivation accounted for 11.8-17.5% of the variance of the dependent variables (Table 4). Teaching methodology and Text are the two independent variables which accounted for the highest percentages of intrinsic motivation variance, 17.5% and 17.2%, respective-

ly. These results are consistent with the results of Pearson's correlation analysis.

Although simple regression showed all five 5Ts components could predict intrinsic motivation, stepwise regression revealed that only Teaching methodology and Text played a predictive role for this dependent variable, as presented in Table 5 and Figure 1 below. The accounted variance was 21.3%. However, while Teaching Methodology accounted for 17.5%, adding Text contributed only an increase of 5.6%.

DISCUSSION

Students' Intrinsic Motivation

This study aimed to evaluate Vietnamese students' intrinsic motivation and perceptions of the five components of the 5Ts framework and to investigate its link with these two variables. The results showed high levels of motivation and perceptions, positive correlations between students' intrinsic motivation and 5Ts framework components, and a predictive role of motivation construct.

Table 3

Pearson's Correlation between Intrinsic Motivation and 5Ts Components

	Teacher	Teaching methodology	Task	Text	Test
Intrinsic motivation	.382**	.428**	.393**	.424**	.355**

*Note. ** Correlation is significant at the 0.01 level (2-tailed).*

Table 4

Results of Simple Regression Employing the 5Ts Components as Predictors[a]

Predictor	B	β	Adjusted R square	p-value	VIF
Teacher	.440	.382	.138	.000	1.000
Task	.462	.393	.147	.000	1.000
Test	.401	.355	.118	.000	1.000
Teaching methodology	.481	.428	.175	.000	1.000
Text	.476	.424	.172	.000	1.000

Note. [a]Dependent variable: Intrinsic motivation

Table 5

Results of Stepwise Regression Employing the 5Ts framework components as Predictors[a]

Model	Predictor	B	b	Adjusted R square	p-value	VIF
1	Teaching methodology	.481	.428	.175	.000	1.000
2	Teaching methodology	.328	.292	.231	.003	1.297
	Text	.319	.285		.004	1.297

Note. [a]Dependent variable: Intrinsic motivation

Figure 1

Histogram of Regression Standardized Residual of stepwise regression for intrinsic motivation as dependent variable
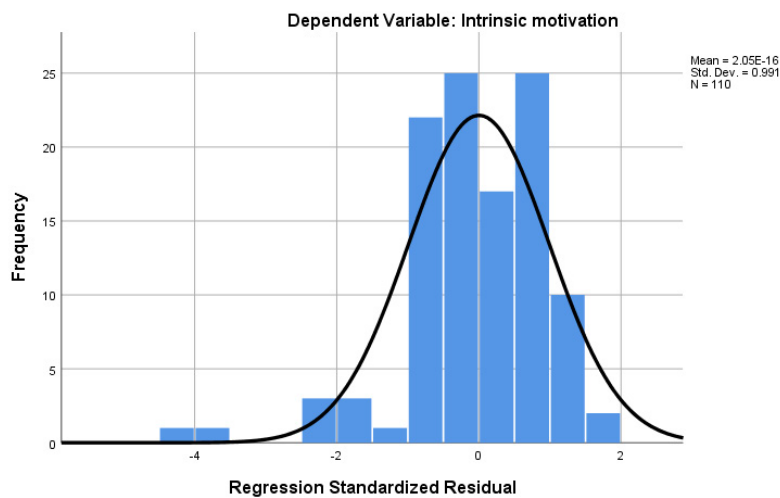
The high level of present learners' intrinsic motivation is consistent with the findings of previous reports for Vietnamese students (e.g., Ngo et al., 2017; Nguyen & Habók, 2021). Ngo et al. (2017) found that English-majored and non-English-majored students were highly motivated to learn English. Nguyen and Habók (2021) reported similar intrinsic motivation in non-English-majored students. The result of this study also supports the finding of Phuong (2020), who investigated Vietnamese students' motivation in learning online English courses.

The present high intrinsic motivation may be due to the participants themselves as the students majoring in English. One should be interested in English-speaking countries, cultures and people to some extent when they choose a major in English studies. The high intrinsic motivation may also be partly due to the increased popularity of, for example, English songs and movies, television channels, and podcasts in Vietnam, accompanied by a higher financial capability of its people to afford related devices and services. Another reasonable explanation is the teaching-learning English mode in Vietnamese universities has been shifted from a teacher-centred to an integrated approach, which enhanced students' enjoyment of English learning (Su, 2007). The present students' high intrinsic motivation is valuable since, different from the extrinsic one, this type of motivation retains its effectiveness in the long term and is an impetus for learning success and psychological satisfaction (Deci & Ryan, 2008).

Students' Perceptions of the 5Ts

Previous researchers have used a self-report questionnaire to evaluate Chinese students' perspectives towards the 5Ts constituents and found no component to exceed a mean score of 4 on the 5-point Likert scale (Wang & Lee, 2019). The means of the student's perceptions of all five 5Ts components are higher than the reported values (i.e., Wang &

Lee, 2019), and the reason may probably be the different learning contexts as the discussion below. Among the five components of the 5Ts framework, the present EFL students evaluated the Teacher component with the highest mean. That implies teacher immediacy behaviour had a crucial role in motivating the participants in English learning. The reason may be the student's English learning experience working with qualified teachers in some courses and not-so-skilful teachers in others. The experiences may help the students to realize what teacher-induced factors motivate them in English learning. It is psychologically understandable that the students would be reluctant and even demotivated to learn in a class of unfriendly, unfair and low-passion teaching teachers.

The second highest place of the component Teaching Methodology may be explained by the fact that some Vietnamese English teachers continue to practice the traditional teacher-centred teaching approach, which may cause the students to feel unmotivated in their learning (Thompson, 2009). Thus, the students may compare their experiences working with such teachers to those with qualified teachers and know what teaching methods motivate them to study English.

The high means of the student's perceptions of the remaining three components of the 5Ts framework also may be reasoned partly by the unpleasant, if not disappointing, learning experiences that the students have had in school due to traditional teaching and learning methods where the teacher is an information provider and limited classroom activities (Thompson, 2009; Canh, 2017).

As mentioned above, all types of motivation in the SDT stand on the background of three basic psychological needs (Deci & Ryan, 1985 and 2002; Grolnick & Ryan, 1989; Furrer & Skinner, 2003; Dörnyei & Ushioda, 2011; Ryan & Deci, 2017). Thus,

it is reasonable to hypothesise that students' motivation has some relationship with their perceptions towards the 5Ts framework since the two originate on the same basis. As shown in Table 3, the Teacher and Teaching methodology factors are the most effective motivating components. This result probably implies that among the three basic psychological needs in SDT, relatedness, namely social connections and tight concern for others, has more effect on the respondents than the other two. Meanwhile, the third place of Task and the fourth place of Test might be due to a more effective influence of the basic psychological need of competence. The students probably feel more comfortable and confident if they can successfully perform the classroom activities and the final learning course assessment.

The current high mean scores of perceptions of the 5Ts framework imply that most participants felt their motivation to study English, at least the intrinsic one, would be improved through the 5Ts framework implementation of the teachers. It is worth noting that although the affective order was Teacher > Teaching methodology > Task > Test > Text in this investigation, it might not be the same in other work. The reason is that, as mentioned above, the order may depend on the student's English learning experiences working with qualified and unqualified teachers. Namely, differences in participants' learning contexts would result in different responses to the 5T questionnaire scale.

Pearson's Correlation and Regression Analysis

Pearson's positive coefficients probably indicate that students with high intrinsic motivation felt more motivated by the teachers' 5Ts implementation than those with low ones. On the other hand, the present findings support the hypothesis that the 5Ts can enhance students' motivation, at least the intrinsic one, as a motivational framework. As shown in Table 3, among the five components of the 5Ts framework, Teaching methodology and Text possessed the highest coefficients in the relationship with the student's intrinsic motivation. That means, although the participants believed that all five components motivated them in learning English, they placed Teaching methodology and Text crucial roles in improving their intrinsic motivation. Appropriate teaching methods and teaching-learning materials may enhance the student's intrinsic motivation to almost 50%. To a lesser extent, together with tasks and tests, the teacher's manner, for example, friendly, warm, and impartial, can also cause an increase in the learning motivation of the student. Although some previous studies used different teacher-related factors from the 5Ts framework, their findings support the current Pearson correlation result. Kikuchi (2009) found that inappropriate teacher behaviour and teaching methods demotivated students in English learning. Falout et al. (2009) revealed that teacher immediacy was a crucial factor that affected English learning motivation. Quadir (2017) also showed that teachers' instructional style, personality, and

attitude were dominant variables affecting the students to study English.

All the evidence proved that the employed regression analysis was valid and that students' perceptions of the five components of the 5Ts could predict intrinsic motivation. The positive constants and coefficients indicate that increasing the students' perceptions of the 5Ts framework will increase intrinsic motivation. Combining these regression results with the correlation findings discussed above implies that the English teacher will face a challenge working with low levels of intrinsic motivation because even good practice in teaching strategy according to the 5Ts framework still motivates such students not much. These findings mean that, for effective teaching, perhaps the teacher should apply an added approach to enhance intrinsic motivation, at least for the students with low levels, parallel with the 5Ts for the whole class.

Dörnyei and Ushioda (2013) proposed that learning motivation, student autonomy, and language learning achievement interact in a cyclic causality in which motivation is the cause of student autonomy and the effect of learning achievement. Assuming a correlation between the teachers' performance of the 5Ts framework and students' learning motivation, the former may directly/indirectly influence the student's learning autonomy and language achievement. Future research may be worth examining these hypotheses.

Pedagogical Implications and Limitations

Like any other group, the students of an English classroom differ. Individual differences often force the teacher to select a solution for an encountering problem based on the 'average' value. The findings of this study suggest the helpfulness of the investigation of the student's intrinsic motivation and perceptions of the 5Ts framework to improve teaching performance. While the used self-report tests of intrinsic motivation and 5Ts components are simple, they appear to provide many 'average' values for choosing an appropriate teaching method, task, text, and test, not to mention the teacher's appearance and mood. Furthermore, understanding the relationship between students' intrinsic motivation and the 5Ts framework components might allow the teacher to help enhance the students' intrinsic motivation benefiting them in long-term learning of the target language.

As the employed two scales were self-report measures, the first limitation of this work is possible response bias. The second one was those disadvantages associated with convenience sampling of the participants. The somewhat small sample size also may be another weak spot. Future work in this direction is worth considering, for example, a combination of a self-report questionnaire with qualitative measures such as interviews or classroom observation. As the number of students studying English as a foreign language and majoring in other fields different from English Studies is over-

whelming, recruiting non-English-majored students as the study participants may help obtain a larger sample size and avoid convenience sampling.

CONCLUSION

This work explored Vietnamese English-major students' intrinsic motivation and perceptions of the 5Ts framework in English learning by using questionnaire responses from 110 Vietnamese English-major students. It also performed Pearson's correlation and regression analysis to deepen understanding of the relationship between intrinsic motivation and 5Ts framework components.

This research revealed that students' intrinsic motivation and perceptions towards the 5Ts framework were favourable based on a Likert-five-point scale evaluation. In addition, the students' perceptions of the 5Ts framework components predicted their intrinsic motivation. The current finding implies that teachers can improve their students' motivation by doing well in the 5Ts framework. It also suggests that the teacher may need an added approach to enhance the intrinsic motivation of the students with low levels, parallel with the teaching strategy for the whole class. Last but not least, it is worth noting that this study has some limitations, including a relatively small sample size, possible response bias, and disadvantages of the sampling method associated with the present research design. It may be worthwhile for incoming works in this research direction to avoid these weak spots.

DECLARATION OF COMPETITING INTEREST

None declared.

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Examining the Evolution and Components of the Culture of Learning in University Education: A Systematic Scoping Review

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ABSTRACT

Introduction: The term "culture of learning" frequently appears in research on educational development and reform, yet defining it precisely remains challenging. Given its varied interpretations across scientific fields, it is crucial to review how authors use "culture of learning" in the context of modern educational environments.

Purpose: The purpose of this study is to comprehensively examine and map the existing literature on the concept of "culture of learning" within educational environments.

Method: The research strategy for this scoping review was structured around the "problem, concept, and context (PCC)" framework to ensure a comprehensive and logical exploration of the literature. This approach facilitated the systematic identification and selection of relevant materials that provide a rationale for each chosen criterion. A detailed research protocol was established prior to initiating the study, outlining the objectives, inclusion criteria, and methodological approach. The reporting of this systematic scoping review adheres to the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) guidelines, ensuring transparency, rigor, and reproducibility in the review process. This methodology was selected to provide a clear and structured pathway for mapping the existing literature on the culture of learning, highlighting key themes, trends, and gaps within the field.

Results: Upon reviewing 74 articles, we identified and clustered the most frequently occurring terms in the titles, resulting in the formation of five distinct area clusters. These clusters encompass: the effectiveness of teaching and learning processes (and their components); teaching/learning trends; learning styles and processes (and their components); learning model components; and the emphasis on academic literacy as an integral part of the learning culture. Additionally, components of the architecture of the culture of learning were identified: learning environments, learning groups, learning subcultures, learning approaches and methods, and learning values and traditions. This comprehensive analysis allowed to define and structure the components of the learning culture.

Conclusion: This scoping review contributes to the ongoing efforts to understand the concept of the "culture of learning" by providing comprehensive definitions and analyzing its possible components. The results offer educators and policymakers a clearer understanding of what constitutes a culture of learning, enabling them to design and implement more effective educational strategies and policies. These findings can guide the development of curricula that better integrate various learning cultures, thereby enhancing the educational experience for students. By identifying key trends and components of the culture of learning, this review provides a foundation for further research that can explore new methodologies and approaches in education, ultimately leading to improved learning outcomes and more dynamic educational environments.

KEYWORDS

culture of learning, learning culture, learning environment, learning trends, organizations, universities

INTRODUCTION

Reference to the culture of learning is found in many research papers on the development and reform of educational environments (Davis et al., 2023; Ellis, 2022; Wong et al., 2023), as well as in papers examining and analyzing individual cases and problems encountered by teachers and learners in the field of education (Heng, 2023; Abongdia, 2014; Mustafa, 2013). Researchers themselves note that defining "culture of learning" is challenging (Bada et al., 2012; CPD, 2020) due to its broad usage alongside terms like "organizational culture," "learning climate," and "learning organization" (CPD, 2020). Within the interpretation of learning culture, learning is viewed as a process through which cultural resources are distributed in specific localized groups of learners and society at large (Kumpulainen et al., 2007). It is logical to define "culture" in relation to "learning," but attempts to build a coherent system around the concept of "culture" intersect with psychology, sociology, cultural studies, pedagogy, and communication theory, leading to various interpretations.

Shweder (2015) describes cultural psychology as a project designed to critically assess the limitations of uniformitarian versions of psychic unity. Alternatively, cultural psychology studies ethnic and cultural sources of diversity in emotional and somatic functioning, self-organization, moral evaluation, social cognition, and human development. LaBelle and Ward (1996) suggest that "culture" evolved from an anthropological term characterizing the lifeways of racial and ethnic populations to a broader term implying shared identity, goals, and status. Carbaugh (2013) defines "culture" in several ways, including a generic concept distinguishing humans from animals, a distinctive concept differentiating human groups, an evaluative concept distinguishing higher from lower groups, and a cognitive concept identifying mental maps used to perceive the world. Pedagogical culture, as defined by Myllykoski-Lain et al. (2022), represents values, attitudes, norms, principles, practices, and structures within a community.

Given the broad interpretation of "culture" across scientific fields, it is contemporary and important to review how authors define the "culture of learning" concerning the formation and development of educational environments. This review aims to trace the evolution of this definition and its components, particularly in university education, historically the drivers of educational progress and broader societal development.

According to data from Scopus, cross-referenced with Springer LINK, it is possible to identify and systematize themes addressed by authors from the 1990s onwards concerning the culture of learning. Studies from the 1990s mainly focused on predicting the future of university education, linking learning culture with the prospects of digitalization (Duderstadt, 1997) and discussing educational

standards in developing countries (Strydom, 1993; Garbers, 1991; Sawyerr, 1995). Other studies explored factors affecting learning processes, such as emotions (Ingelton, 1995) and new learning strategies (Caplow et al., 1995).

More recent studies from the early 2000s have focused on professional development within specific disciplines, such as the training of future medical specialists (Issenberg, 2008) and community-university collaborations (Suarez-Balcazar et al., 2005). These studies also analyzed the results of digitalizing university education (Albano, 2001) and discussed the development of university and professional education, including the culture of learning and integration processes in various countries (Marks, 2005; McMorland, 2003; Saltmarsh, 2008; Jin, 2006; Rennie, 2007).

The goal of this review is to analyze the changing perception of the culture of learning within university education, influenced by significant societal developments. This systematic scoping review addresses the following research questions based on the PCC framework:

RQ1.   What is the culture of learning?

RQ2.   What components of the culture of learning have been defined?

RQ3.   What educational areas are crucially dependent on the culture of learning?

METHOD

Transparency and Protocol

The author hereby certifies that the results of the research work under concern contain an honest, precise, detailed and transparent description of all the research procedures being conducted; that all the noteworthy aspects of the study are examined and presented thoroughly; that any deflection from the initial research plans were made according to reasons that arose during the systematization and analysis of the collected material, and therefor, have a solid foundation. A research protocol was developed before commencing the current study, and the reporting of this systematic scoping review is arranged in accordance with the guidelines of the PRISMA-ScR methodology.

Search Strategies

Search Sources

This systematic scoping review utilizes reliable materials sourced from the Scopus database. The keywords "culture of learning," "learning culture," and "universities" were employed to identify relevant documents. The search focused

on research articles and reviews published between January 2014 and January 2024. However, several articles outside this timeframe were included as they effectively illustrate trends in the perception of the studied definitions. Additionally, the bibliographies of the included studies were examined to identify supplementary sources that support the research.

Search Eligibility Criteria

The effective research strategy was based on the data corresponding to the "problem, concept, and context (PCC)" markers in accordance with the logically set out materials giving a rational for each criterion being chosen (see Table 1).

Study Selection

The selection process involved assessing the titles and abstracts of the studies based on predefined eligibility criteria. The reviewers independently analyzed and cross-checked their perceptions of the selected materials against these criteria. Studies that met the criteria were then chosen for a

comprehensive full-text analysis, which constituted the next phase of the selection process. During the full-text screening phase, the sources were meticulously examined to identify whether they included a definition of "culture of learning" or "learning culture." The co-authors independently conducted the scanning process, cross-checking their interpretations to ensure consistency. Subsequently, the remaining sources were categorized based on the subject matter described in the articles, reviews, or conference papers, ensuring a structured and thematic organization for further analysis.

Data Visualization

To visualize the data, the VOSviewer program was employed to generate visual representations of the co-occurrence network of authors and the co-occurrence network of keywords. The keyword network was constructed based solely on the titles of the articles included in the review, and a term was considered significant if it appeared at least four times. Titles traditionally incorporate the most significant keywords, which, according to the authors, allows for the identification

Table 1

Eligibility Criteria

Criterion	Inclusion	Exclusion	Rationale
Problem	All the studies (journal articles, reviews, conference papers) from the Scopus database relating to the culture of learning, its definition and references in the context of education	All the studies outside the defined field	As the concept of "culture of learning" is not clearly set, and the term itself is widely used, it needs to be more accurately defined, especially in the sphere of education
Concept	Definitions of learning culture (=culture of learning); mentioning and defining its components in the context of education	Other concepts relating to culture of learning	The aim of the review is to define trends, concepts and factors influencing the learning culture developing processes
Context	University learning culture, learning habits, learning environments, learning traditions, longlife learning (university period)	Culture of learning at other educational levels (kindergartens, schools, vocational education)	The review focuses on the learning culture within the university environment, and aims to define factors related to learning culture developing processes
Types of sources	Journal articles, reviews, conference papers	Unavailable sources, sources without full texts	The purpose of the review is to observe the most significant sources from a recognized scientific database
Language of publication	English	Other languages	English is used as a lingua franca of international research works providing the majority of scientific publications
Time period	2014-2024	Research works not related to the defined period	The review makes an attempt to define and study changing and developing processes in the concept of university "culture of learning" of nowadays
Country of publication	Any location	None	To get some understanding of the world tendencies
Database	Scopus	Other sources	The Scopus database is a recognized database of scientific research works with the sources being cited all over the world.
Areas of research	University education (as a Social Science area)	Other research areas	Learning culture is strictly connected with educational processes, and education itself is a discipline related to' social sciences

of the most representative map of major trends in the study of the culture of learning.

Data Extraction

To provide a structured system for data collection, the authors designed a specialized data extraction form. The accuracy of this form was verified by comparing it with relevant studies to ensure that all essential aspects were highlighted and included. The form captured crucial details such as the corresponding author's name, journal title, country, and year of publication. Additionally, we examined whether the articles contained definitions of "culture of learning" or "learning culture," the supposed structure of these concepts (including components if mentioned), and possible characteristics.

All four reviewers participated in the process to cross-check and validate the materials found. When the significance of data was in doubt, a motivated discussion was arranged to clarify definitions or to better understand the views expressed by the source authors.

Data Analysis and Synthesis

To provide precise data analysis allowing for the systematization of results according to the defined criteria, the reviewers combined quantitative methods (e.g., calculating frequencies) with qualitative techniques (e.g., thematic content analysis). Initially, we compiled a list of elements that could potentially be included in the framework to support the understanding of the "culture of learning." This approach enabled the recognition, compilation, and distribution of all relevant information according to the themes mentioned in the reviewed research works. In the subsequent stage of material analysis, a comparative analysis of thematic areas was conducted. Additionally, the team identified the most productive countries (based on the selected articles), whose authors addressed various aspects of the key themes related to the generally accepted concept of learning culture.

RESULTS

Search and Study Selection Results

The initial set of 1540 articles were retrieved using the marker of "education". After new search markers "culture of learning" and "learning culture" were added, 398 articles were identified by the Scopus database searching activity. After removing 98 duplicates, 300 articles were selected. Then 156 articles were removed after evaluating the title and abstract in accordance with the criterion. After reading the content of the articles, another 70 articles were removed. As a result, 74 full-text articles were received. These studies were published in the period 1991-2024. Although it was originally planned to limit the revised period by the years from 2014 to 2024, after careful content analysis, several articles with earlier dates were retained for consideration due to the undoubted value of the information they contained to mention some historical facts connected with the theme being reviewed. The PRISM-ScR chart is shown in Figure 1.

Having obtained 74 articles, we utilized VOSviewer to generate a co-occurrence network of the authors. This analysis revealed that 13 researchers were exploring related themes and engaging in collaborative research within the same time frame (Figure 2).

Demographics of the Included Studies

In order to get an idea of the geography of the works selected for the review, a table was compiled (Table 2). The analysis of the data shows that the highest frequency of works on the topic of interest was found among papers published in the USA (21 publications). Second and third places are taken by the UK (10 publications) and Australia (7 publications). They are followed by China (5 publications) and Canada (3 publications). The following 5 countries are recognized with two publications (Finland, Vietnam, Malaysia, New Zealand and South Africa); and the rest of the countries contributed for 1 publication each. A total of 28 countries contributed to the studies.

According to the studies included in this review, a renewed interest in the subject under examination has been identified. Notably, three papers were published in 2022 (Winstone, 2022; Ellis, 2022; Popov et al., 2022). The year 2023 saw a significant increase, with 21 papers highlighting a growing number of researchers focusing on the culture of learning and its various components (Balleisen et al., 2023; Ifenthaler et al., 2023; Culver et al., 2023; Dziubaniuk et al., 2023; Davis et al., 2023; Tan, 2023; Wong et al., 2023; Ho et al., 2023; Xie et al., 2023; Culver, 2023; Romeiro et al., 2023; Heng, 2023; Hackett et al., 2023; Madanat et al., 2023; Durão et al., 2023; Myllykoski-Laine et al., 2023; Mutale et al., 2023; Vu et al., 2023; Burkhalter, 2023; Müller, 2023; Dammery et al., 2023). Furthermore, four papers published at the beginning of 2024 indicate a continuing interest in the research theme (Hora et al., 2024; Liang et al., 2024; Xu, 2024; Sörensen et al., 2024).

Additionally, we identified and clustered the most frequently occurring words and word combinations in the titles (Table 3) to highlight trends pertinent to research topics within the specified period. The visualization provided a clear illustration of the frequency of use of the most significant words, which contribute to the identification of works in the research database (Figure 3).

When analyzing the selected material based on the identified clusters, the research trends are distributed as follows (Table 4).
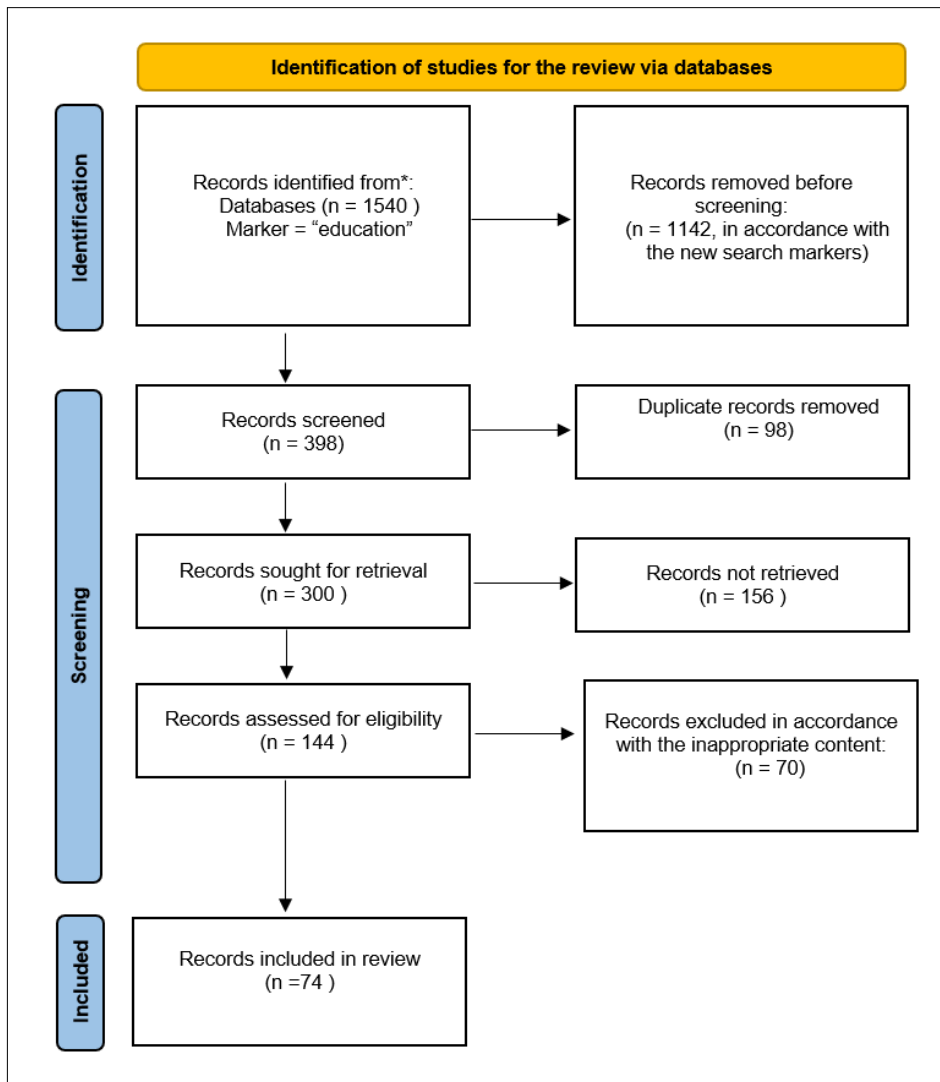
Figure 1

PRRISMA Flawchart

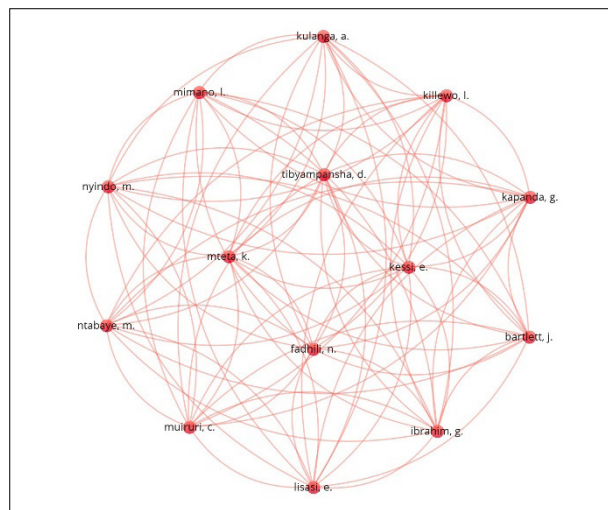

Figure 2

Co-occurrence of the authors

Table 2

Country of publication

Country	Number of publications	Country	Number of publications
USA	21	China	5
UK	10	Ecuador	1
Germany	1	Cambodia	1
Finland	2	Singapore	1
Australia	7	Portugal	1
Malaysia	2	New Zealand	2
Vietnam	2	South Africa	2
Zambia	1	South Korea	1
Jordan	1	The Netherlands	1
Canada	3	Italy	1
Russian Federation	1	Romania	1
Switzerland	1	Brazil	1
Kazakhstan	1	Croatia	1
Indonesia	1	Turkey	1

Table 3

Word clusters based on VOSviewer

Cluster 1. Effectiveness of teaching/learning processes	Effectiveness, online learning, process, social work, student, value
Cluster 2. Teaching/learning trends	Difference, educator, observation, reflection
Cluster 3. Learning model components	Competence, learning model, review, undergraduate student
Cluster 4. Academic literacy as a part of learning culture	Academic literacy, assessment, reading
Cluster 5. Learning style and processes connected with it	Learning style, strategy

Figure 3

Terms co-occurrence
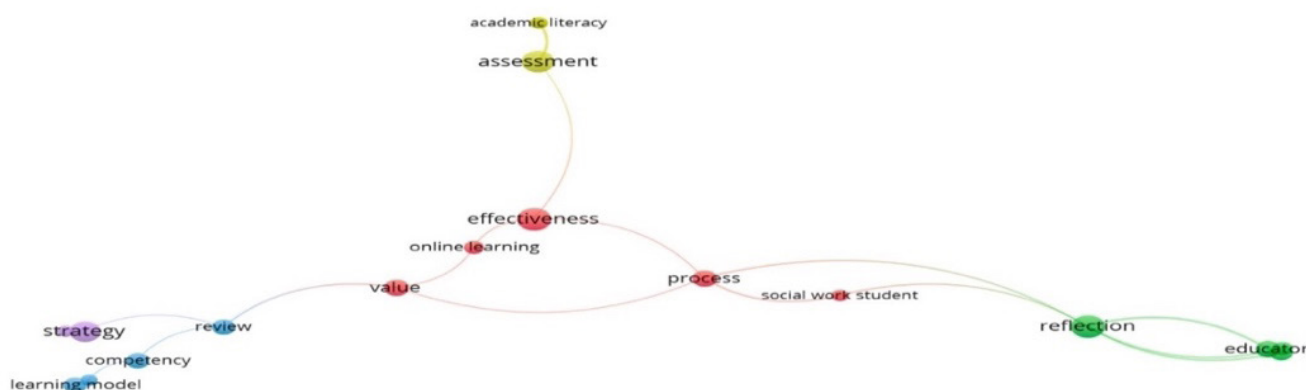
Table 4

Distribution of the research trends within the culture of learning areas

Cluster	Arears/problems
Effectiveness of teaching/learning processes	Social anxiety as a part of digital environment (Hora et al., 2024); the industry-based knowledge as a cultural script (Ifenthaler et al., 2023); teaching and learning sustainability in a digital learning environment (Dziubaniuk et al., 2023); evidence-based method of online learning (Wong et al., 2023); relationship between career development learning (CDL) and students' perceived employability (SPE) (Ho et al., 2023); interdependence of social motivation and deep learning (Xie et al., 2023); students as partners in specific sociocultural and policy variations (Madanat et al., 2023); collaborative online international learning (Madanat et al., 2023); reflection on professional practice in a networked learning community in a digital environment (O'Connell, 2014); cognitive styles in "cultures of learning" (Morley, 2014); university organizational culture and student preparation for the future workforce (Briody et al., 2019); developing a culture of learning around a digital program of assessment Miller et al., 2015); smart education (Glukhov et al., 2017); contribution of Alumni Graduates Association into the consolidation of the culture of learning in the University (Maior et al., 2014); digital learning Healthcare System (LHS) environment (Lindsell et al., 2021); building disciplinary identities within a learning culture (Li et al., 2019); self-reflections, collaboration, and research (Burkhalter, 2013); staff practising a variety of cultural approaches and intercultural communication strategies to advance teaching and learning (Jin et al., 2017); mid-level leaders and their role in a culture of learning (Usunier et al., 2019).
Teaching/learning trends	The culture of feedback as a part of culture of learning (Winstone, 2022); creation a range of assessments (Davis et al, 2023); formation of institutional culture through importance of research (Culver, 2023); a culture of sharing (Myllykoski-Laine et al., 2023); continuing culture of learning within institutional culture (Mutale et al., 2023); collaborative learning (Popov et al., 2022); group learning (Vu et al., 2023); student-centered culture of learning in educational institutions (Xu, 2024);
Learning model components	Professional communities (Balleisen et al., 2023); project-based learning (Culver et al., 2023); application of knowledge management into pandemic scenario (Romeiro, 2023); experiential learning model (Durão et al., 2023); academic marketplace and limited (female) learning environment (Tomko, 2020); the role of the celebrity in the motivational component within a culture of learning (Abongdia et al., 2014); culture of learning in the context of measurement and evaluation (Sörensen et al., 2024); learner-centered teaching as a part of culture of knowledge (Milistetd et al., 2019); sustainable assessment (Thomson et al., 2010); a patient-centered context for learning (medicine) (Sims et al., 2016); interprofessional practices (Lewitt et al., 2019); computational model of learning (Singh et al., 2020)
Academic literacy as a part of learning culture	Challenges that limit possibilities for further positive developments of higher education research (Heng, 2023); assessment strategy to support the development of academic literacies and learning cultures (Saltmarsh, 2008);
Learning styles and processes	"What" and "how" of learning processes (Ellis, 2022); learning from smb's own experiences and trial and errors (medicine) (Tan, 2023); subject (anatomy) national learning styles (Mustafa et al., 2013); Living Classroom (LC) collaborative approach to integrated learning (medical students) (Boscart et al., 2017); developing learning processes through medical organization (Singh et al., 2020); developing skills in peer learning and peer engagement, and to strengthen a culture of learning across multiple role relationships (Singh et al., 2020); taking into account the peculiarities of Western and Eastern cultures in planning of clinical learning (Findyartini et al., 2016) ; implementation of a Western-based pedagogy in a Malaysian learning context (Puteh-Behak et al., 2015); evolving culture of learning from what we do and doing what we learn (within the digital medical Learning Healthcare System) (Lindsell et al., 2021 ; to overcome barriers of communication among specialists (physicians) (Lipitz-Snyderman et al., 2017); politically correct speech as a part of renewal of a learning culture (Müller et al., 2023).

Effectiveness of Teaching / Learning Processes

This cluster focuses on the effectiveness of teaching and learning processes within the context of learning culture, particularly in digital environments. The impact of social anxiety on student engagement and learning outcomes is significant, with digital learning settings potentially exacerbating these issues (Hora et al., 2024). Practical, industry-relevant knowledge plays a crucial role in shaping and enhancing the learning experience, serving as a cultural script that aligns educational content with real-world applications (Ifenthaler et al., 2023).

Sustainable practices in online education are essential for long-term success, emphasizing the need for teaching methods that can adapt to and thrive in digital environments (Dziubaniuk et al., 2023). Utilizing evidence-based methods for online learning can significantly improve educational outcomes by ensuring that instructional strategies are grounded in solid research (Wong et al., 2023). Additionally, effective teaching methods that integrate career development learning (CDL) enhance students' perceived employability (SPE), thereby improving their career prospects (Ho et al., 2023).

The interplay between social motivation and deep learning underscores the importance of social factors in driving cognitive engagement, suggesting that fostering a supportive social environment can enhance learning depth (Xie et al., 2023). Collaborative learning and international partnerships are also vital, as they promote global awareness and intercultural competence, enriching the educational experience (Madanat et al., 2023). Reflective practices in professional learning communities within digital environments contribute to professional growth and the development of effective teaching strategies (O'Connell, 2014).

Understanding cognitive diversity through the exploration of different cognitive styles can enhance teaching effectiveness by tailoring educational approaches to individual learning needs (Morley, 2014). The relationship between university organizational culture and student preparation for the workforce highlights the significant impact of institutional culture on student readiness for professional life (Briody et al., 2019).

Integrating advanced technologies in education, as seen in smart education initiatives, supports the development of a learning culture that embraces digital tools and innovative assessment methods (Miller et al., 2015; Glukhov et al., 2017). The involvement of Alumni Graduates Associations in university life can further consolidate a culture of learning, providing valuable support and resources for current students (Maior et al., 2014).

In healthcare education, the digital learning environment of the Learning Healthcare System (LHS) emphasizes the importance of digital tools in training healthcare professionals (Lindsell et al., 2021). Building disciplinary identities within a learning culture enhances learning outcomes by fostering a strong sense of belonging and purpose among students (Li et al., 2019).

Self-reflections, collaboration, and research are key components of an effective learning culture, encouraging continuous improvement and innovation in teaching practices (Burkhalter, 2013). Staff who practice a variety of cultural approaches and intercultural communication strategies can advance teaching and learning by adapting to diverse student needs and promoting inclusive education (Jin et al., 2017). Finally, mid-level leaders play a critical role in shaping a culture of learning within educational institutions, guiding the implementation of effective educational practices and policies (Usunier et al., 2019).

Teaching/Learning Trends

This cluster focuses on the internal processes that reflect current trends in organizing and selecting procedures aimed at creating productive educational and learning environments. It examines various learning subcultures that influence the choice of these procedures. Key aspects of this cluster include the emphasis on internal processes and learning subcultures, the culture of feedback, and the role of institutional culture and research.

Davis et al. (2023) and Popov et al. (2022) highlight the importance of creating a range of assessments and fostering collaborative learning. These elements are essential in developing comprehensive educational strategies that cater to diverse learning needs. Vu et al. (2023) emphasizes the significance of group learning, which enhances peer interaction and collective problem-solving skills. Myllykoski-Laine et al. (2023) discusses the culture of sharing, which promotes a collaborative and inclusive learning environment. Mutale et al. (2023) explores the continuation of the learning culture within institutional frameworks, ensuring that the culture of learning is sustained and evolves over time. Xu (2024) focuses on the development of a student-centered culture of learning, which prioritizes the needs and preferences of students in educational institutions.

The culture of feedback, as examined by Winstone (2022), is an integral part of the learning culture. This involves creating mechanisms for regular, constructive feedback that helps students improve their academic performance and personal growth. Additionally, Culver (2023) discusses the formation of institutional culture through the importance of research, emphasizing the role of academic research in shaping the values, norms, and practices within educational institutions.

Learning Model Components

The cluster on learning model components focuses on various elements that contribute to effective educational frameworks. Professional communities play a crucial role in fostering collaborative learning environments where knowledge is shared and developed collectively (Balleisen et al., 2023). Project-based learning is another significant component, emphasizing hands-on, real-world projects that enhance student engagement and learning outcomes (Culver et al., 2023).

In times of crisis, such as a pandemic, the application of knowledge management becomes essential, enabling educational institutions to adapt and continue functioning effectively (Romeiro, 2023). Experiential learning models, which emphasize learning through experience and reflection, provide valuable opportunities for students to apply theoretical knowledge in practical settings (Durão et al., 2023).

The academic marketplace and gender-specific learning environments highlight the unique challenges faced by female learners, underscoring the need for more inclusive educational models (Tomko, 2020). The motivational component within a culture of learning can be significantly influenced by celebrities, who can inspire and motivate students

through their achievements and endorsements (Abongdia et al., 2014).

Measurement and evaluation are critical in assessing the effectiveness of learning models, ensuring that educational practices meet the desired standards and objectives (Sörensen et al., 2024). Learner-centered teaching approaches, which focus on the needs and experiences of students, are integral to fostering a culture of knowledge and promoting deeper learning (Milistetd et al., 2019).

Sustainable assessment practices, which prioritize long-term learning and development over short-term performance, are essential for creating enduring educational impacts (Thomson et al., 2010). In medical education, a patient-centered context for learning ensures that students develop the necessary skills and empathy to provide high-quality patient care (Sims et al., 2016).

Interprofessional practices, where students from different professional backgrounds learn together, enhance collaborative skills and prepare them for real-world teamwork (Lewitt et al., 2019). Computational models of learning, which use algorithms and data analysis to optimize educational processes, represent the intersection of technology and education, offering new ways to understand and improve learning outcomes (Singh et al., 2020).

Academic Literacy as a Part of Learning Culture

Academic literacy plays a pivotal role in shaping the learning culture within educational institutions. It encompasses the skills and competencies necessary for students to engage effectively with academic content and contributes to their overall academic success. One of the primary challenges that limit the possibilities for further positive developments in higher education research is the insufficient focus on fostering academic literacy (Heng, 2023). This gap underscores the need for targeted strategies to enhance these critical skills.

Developing an effective assessment strategy is essential for supporting the growth of academic literacies and fostering a robust learning culture. An assessment strategy should be designed not only to evaluate student performance but also to promote the development of academic skills that are fundamental to scholarly activities (Saltmarsh, 2008). Such a strategy helps students build the necessary competencies to navigate and contribute to academic discourse, thereby enhancing their learning experience and academic outcomes.

By integrating comprehensive assessment methods that focus on academic literacy, educators can create a more supportive and enriching educational environment (Heng, 2024). This approach ensures that students are well-equipped to meet the demands of academic rigor and can effectively communicate their ideas and research findings. Consequently, fostering academic literacy is essential for advancing the quality and impact of higher education (Tikhonova et al., 2024).

Learning styles and Processes

The study of learning styles and processes is crucial for understanding the diverse ways in which students acquire knowledge and develop skills. The "what" and "how" of learning processes are essential components that define the effectiveness of educational practices (Ellis, 2022). This cluster emphasizes the importance of experiential learning, where students learn from their own experiences and through trial and error, a method particularly relevant in medical education (Tan, 2023).

Different national learning styles also play a significant role in shaping educational outcomes. For example, specific approaches to teaching anatomy can vary significantly between countries, reflecting broader cultural differences in learning styles (Mustafa et al., 2013). In the context of medical education, collaborative approaches like the Living Classroom (LC) model integrate learning and practice, allowing medical students to engage deeply with the material through real-world applications (Boscart et al., 2017).

Developing learning processes within medical organizations involves fostering skills in peer learning and engagement, thereby strengthening a culture of learning across multiple role relationships (Singh et al., 2020). Effective educational planning must consider cultural nuances, such as the differences between Western and Eastern approaches to clinical learning, to ensure that teaching methods are culturally relevant and effective (Findyartini et al., 2016). Implementing Western-based pedagogies in contexts like Malaysia requires careful adaptation to local cultural and educational expectations (Puteh-Behak et al., 2015).

The evolution of learning culture is also influenced by digital advancements in the medical Learning Healthcare System (LHS), which promotes learning from practice and implementing what is learned in clinical settings (Lindsell et al., 2021). Overcoming communication barriers among specialists is another critical aspect, as it enhances collaboration and improves patient care (Lipitz-Snyderman et al., 2017). Additionally, the use of politically correct speech reflects a broader effort to renew and adapt learning cultures to contemporary social norms (Müller et al., 2023).

The Definition of Learning Culture

Having obtained a sufficiently large number of references to various aspects and components of a learning culture as a result of analyzing the samples, the reviewers attempted

to identify sources in which authors gave full or partial definitions of the concept of learning culture. however, this task proved to be quite difficult due to the diversity of material available, and the possible supposed lack of a holistic view of the concept. Nevertheless, the reviewers have been able to compile a set of partial definitions reflecting the authors' views on the concept of learning culture (Table 5).

All the above-mentioned partial definitions extracted from papers limited by the years of 2014-2024 show that in the samples used, despite the presence of the phrase 'culture

Table 5

Culture of learning partial definitions

	Culture of learning defined (full or partial, implicit or explicit)	Extracted from
1	... learning within one cultural context – either abstract and lecture-based (i.e., graduate school) or hands-on and workplace-relevant (i.e., industry)	Hora, 2024
2	...learning as developing and changing students' conceptions	Winstone, 2022
3	...applied, project-based learning to positive student outcomes	Balleisen et al., 2023
4	... the co-constructed nature of learning	Culver et al., 2023
5	A new normal online/digital sustainable learning	Dziubaniuk et al., 2023
6	Customized learning	Dziubaniuk et al., 2023
7	... learning is about discovering new concepts...	Utecht et al., 2019
8	Learning through experiencing the local way of life	Davis et al., 2023
9	Work-integrated learning with transition through activities	Ellis, 2022
10	Learning from personal encounter	Tan, 2023
11	Conventional and distance learning	Wong et al., 2023
12	Deep learning is learning that takes root in our apparatus of understanding, in the embedded meanings that define us and that we use to define the world	Extracted from (Tagg, 2003) through Xie et al., 2023
13	Collaborative partnership learning using cross-cultural context	Liang et al., 2024
14	Learning through research culture	Heng, 2023
15	Collaborative Online International Learning (COIL), an educational approach using online technology, is a popular tool within universities around the world to help internationalize the curriculum.	Extracted from (Rubin, 2011) through Hackett et al., 2023
16	Entrepreneurship learning	Durão et al., 2023
17	...'passive and teacher-centered teaching and learning style' in a Vietnamese culture of learning	Yates et al., 2012
18	Culture of learning can be developed through a Learning design framework (Experience is the foundation and the stimulus for all learning. • Learners actively construct their own experience. • Learning is a holistic process. • Learning is socially and culturally constructed. • Learning is influenced by the social and emotional context in which it occurs)	Smith, 2005
19	the organizational culture is a part of culture of learning	Briody et al., 2019
20	developing an accountable culture of engaging and learning from patients, who are often underexplored sources of information.	Singh et al., 2020
21	Learning culture including learning standards and capabilities is something that teachers and administrators need to be aware of in order to fully comprehend its significance and role for students.	Vu et al., 2023
22	Power distance, uncertainty avoidance, collectivism vs individualism, masculinity vs femininity as key differencies in Western and Asian cultures of learning	Findyartini et al., 2016
23	A patient-centered context for learning is a part of a culture of learning for medical students	Sims et al., 2016
24	Communication between professionals is a part of a learning culture in the sphere of medicine	Lipitz-Snyderman et al., 2017

of learning' in the texts, the authors do not aim to produce a comprehensive study of all components or culture of learning or give a comprehensive definition of its nature in accordance with the current changes in the learning paradigm. Moreover, the changes themselves are mentioned as scenario markers through which the authors justify the relevance of their own studies, most of which analyze a specific, often nationally specific, cases; and they use the term of "culture of learning" as a broad term that includes many sets of concepts and definitions depending on the intention of the authors. Thus, it can be assumed that the notion of culture of learning can reasonably be subjected to in-depth research in the nearest future with a view to the possible formation of a new expanded definition. However, the variety of the existing contexts have already given the opportunity to try to define the components of the current architecture of culture of learning.

Culture of Learning Architectural Components

Considering the clustering and extraction of diverse learning culture components the reviewers can suppose that the learning culture architectural components can be conditionally assigned to the following groups (Table 6).

The architecture of learning culture comprises several interconnected components, each playing a crucial role in shaping the educational landscape. By examining the elements identified in Table 5, we can observe how these components interact and influence the overall learning environment.

Learning environments encompass a range of settings that facilitate educational activities. Traditional environments, such as physical classrooms (Burkhalter, 2013), remain foundational, but digital platforms have increasingly gained prominence (Dziubaniuk et al., 2023; Wong et al., 2023; Lindsell et al., 2021). The rise of blended learning, which combines these traditional and digital elements, reflects a significant trend in contemporary education. Furthermore, the distinction between teacher-centered environments (Yates et al., 2012) and student-centered environments (Xu, 2024) highlights the shift towards more learner-focused pedagogies, emphasizing the importance of student autonomy and engagement.

Learning groups represent the various communities involved in the educational process, each contributing to and shaping the learning culture. Individual learners (Findyartini et al., 2016) are at the core, but their experiences are enriched by interactions within professional communities (Singh et al., 2020), organizations (Briody et al., 2019), and alumni networks (Maior et al., 2014). Additionally, the role of parents and families (Wainwright et al., 2010) and gender-specific groups (Findyartini et al., 2016; Tomko et al., 2020) underscores the diverse social dynamics that influence learning outcomes. These groups not only support

individual learning but also foster a collaborative and inclusive educational environment.

Learning subcultures are intrinsic to the broader understanding of learning culture, encompassing various niche communities that contribute to the educational experience. For instance, industry-based knowledge as a cultural script (Ifenthaler et al., 2023) and career development learning (Ho et al., 2023) highlight the practical and vocational aspects of education. Organizational culture (Briody et al., 2019) and a culture of engaging with patients in medical learning (Singh et al., 2020) demonstrate how professional practices and values are integrated into the learning process. Academic literacy (Heng, 2023; Saltmarsh, 2008) and a culture of sharing (Myllykoski-Laine et al., 2023) further illustrate the intellectual and collaborative dimensions of learning subcultures.

The evolution of educational activities is reflected in the diverse approaches and methods employed in learning environments. Evidence-based online learning (Wong et al., 2023) and experiential learning from personal experiences and trial and error (Tan, 2023) represent modern pedagogical strategies that enhance learning outcomes. Integrated learning (Boscart et al., 2017), deep learning (Xie et al., 2023), and communicative learning (Lipitz-Snyderman et al., 2017) emphasize the depth and interaction necessary for effective education. Collaborative online international learning (Madanat et al., 2023), peer learning (Singh et al., 2020), and concept learning (Utecht et al., 2019) showcase the importance of teamwork and critical thinking. Additionally, project-based (Balleisen et al., 2023), asynchronous (Madanat et al., 2023), conventional (Wong et al., 2023), and distance learning (Wong et al., 2023) methods highlight the flexibility and adaptability required in contemporary education. Learning through research (Burkhalter, 2013) further underscores the significance of inquiry-based learning in fostering innovation and knowledge creation.

Although not extensively covered in this review, learning values and traditions form the ethical and cultural backbone of educational practices. These values influence specific learning outcomes shaped by historical and contextual factors, including successful or unsuccessful learning experiences (Davis et al., 2023). Understanding and integrating these values into the educational framework is essential for creating a cohesive and supportive learning culture (Davis et al., 2023; Zou, 2022).

DISCUSSION

"Culture" is a term that refers to a large and diverse set of mostly intangible aspects of social life. It consists of the values, beliefs, systems of language, communication, and practices that people share and that can be used to define them

Table 6

Groups of culture of learning architectural components

1	Learning environments	Traditional (Burkhalter, 2013);
		Digital (Dziubaniuk et al., 2023; Wong et al., 2023; Lindsell et al., 2021);
		Teacher-centered (Yates et al., 2012);
		Student-centered (Xu, 2024);
2	Learning groups	Individual learners (Findyartini et al., 2016);
		Professional communities (Singh et al., 2020;
		Organizations ((Briody et al., 2019);
		Alumni (Maior et al., 2014);
		Parents and families (Wainwright et al., 2010)
		Gender groups (Findyartini et al., 2016; Tomko et al., 2020);
3	Learning subcultures	the industry-based knowledge as a cultural script (Ifenthaler et al., 2023);
		career development learning (CDL) (Ho et al., 2023);
		organizational culture (Briody et al., 2019);
		culture of engaging and learning from patients within culture of medical learning (Singh et al., 2020);
		academic literacy (Heng, 2023; Saltmarsh, 2008);
		a culture of sharing (Myllykoski-Laine et al., 2023)
4	Learning approaches and methods	evidence-based method of online learning (Wong et al., 2023);
		learning from smb's own experiences and trial and errors (Tan, 2023);
		integrated learning (Boscart et al., 2017);
		deep learning (Xie et al., 2023);
		communicative learning (Lipitz-Snyderman et al., 2017);
		collaborative online international learning (Madanat et al., 2023);
		peer learning (Singh et al., 2020);
		concept learning (Utecht et al., 2019);
		applied, project-based (Balleisen et al., 2023);
		asynchronous learning (Madanat et al., 2023)
		Conventional (Wong et al., 2023);
		Distance (Wong et al., 2023);
		Learning through research (Burkhalter, 2013);
5	Learning values and traditions	Specific learning outcomes shaped by successful or unsuccessful backgrounds, experiences, and learning processes (Davis et al., 2023; Zou, 2022; Miller et al., 2015);

as a collective (Berger, 2000). When we start thinking about culture, it becomes clear that the notion of culture can be applied to the various components of human activities including education and learning processes.

This review aimed to trace how the perception of the culture of learning has evolved in university education under significant societal development factors. It seeks to define "culture of learning," identify and systematize its components, and highlight educational areas critically dependent on changes in this culture.

Research Focus

The distribution of articles into clusters reveals distinct trends in learning styles and processes, particularly within the context of forming educational environments and the culture of learning in medical education. Prominent themes include collaborative approaches, the development of peer learning and engagement skills, learning through personal experiences and trial and error, the consideration of national learning styles, and the adherence to politically correct communication to overcome barriers (Ellis, 2022). These ele-

ments collectively underscore the essential aspects of effective learning processes in contemporary education.

Academic literacy has emerged as a significant yet underrepresented trend in the development of learning culture. The analysis indicates that relatively few studies focus on this aspect (Heng, 2023; Saltmarsh, 2008), suggesting a need for more attention to academic literacy within the broader discourse on learning cultures.

The data also highlight that the culture of learning encompasses various subcultures, each requiring separate consideration due to their substantial influence on the formation of learning models. These subcultures contribute to a nuanced understanding of how learning environments are shaped and sustained (Balleisen et al., 2023; Culver et al., 2023; Romeiro, 2023; Durão et al., 2023; Tomko, 2020). Trends within the learning culture can be categorized into teaching and learning trends, which are interdependent and facilitate the creation of intercultural tools. These tools enable educators to establish appropriate learning environments that incorporate the relevant elements of learning culture (Davis et al., 2023; Culver, 2023; Myllykoski-Laine et al., 2023; Vu et al., 2023; Xu, 2024).

Additionally, the current research agenda places significant emphasis on the digitalization of education and the social dynamics of students' interactions with external environments. This digital shift has been widely addressed in the literature, reflecting the evolving landscape of educational practices and the integration of digital tools in learning environments (Hora et al., 2024; Ifenthaler et al., 2023; Dziubaniuk et al., 2023; Miller et al., 2015; Glukhov et al., 2017; Maior et al., 2014; Lindsell et al., 2021; Li et al., 2019; Burkhalter, 2013; Jin et al., 2017; Usunier et al., 2019).

Culture of Learning Architecture

Learning architecture consists of and combines various elements into human-centric solutions that provide potential and organizational productivity. The reviewers have defined the following maun learning architecture components: teacher-centered (Yates et al., 2012) and student-centered (Xu, 2024) learning environments; individual learners (Findyartini et al., 2016) professional communities (Singh et al., 2020) and organizations (Briody et al., 2019); various learning methods and approaches used in accordance with specific of learning environments. All the above-mentioned allowed the reviewers to make an attempt of defining a culture of learning definition.

Culture of Learning Definition

The term "culture" is inherently multifaceted, encompassing numerous components and interpretations, making it challenging to define clearly. Some researchers approach "culture" in the context of multicultural research and consumer demand studies, often influenced by specific societal cultures (Kastanakis et al., 2014; Davidoff et al., 2008; Senzaki et al., 2014). Conversely, other scholars examine culture's relationship with science, aiming to assess the cultural dimension's significance in research and academic literacy, and its impact on forming academic culture, including research culture (Tikhonova et al., 2023; Tikhonova et al., 2024).

Findings indicate that research papers from 2014 to 2024 primarily focus on case studies, often centered on national characteristics (Culver et al., 2023; Heng, 2024; Li, 2019; Glukhov et al., 2017). These studies typically address specific problems rather than identifying broad trends or providing comprehensive definitions, resulting in fragmentary definitions that do not clearly depict the components of the culture of learning. The reviewers believe they have identified and systematized the components discussed in the articles and formulated a definition reflecting the phenomenon's essence. Medicine and engineering are highlighted by the analysed papers as key fields critically dependent on changes in the culture of learning (Boscart et al., 2017; Findyartini et al., 2016; Lipitz-Snyderman et al., 2017; Issenberg et al., 2008; Lindsell et al., 2021; Sims et al., 2016).

Table 4 and Table 5 revealed similarities in understanding certain components of the culture of learning with definitions provided in the CIPD report. According to the CIPD (2020), "A learning culture is one that embeds learning into how things are done at an individual, team, and organizational level. This requires strong leaders to follow a strategic model for learning and to support employees towards a collectively shared vision and positive change through open dialogue and reflection. The factors that underpin a learning culture could be reframed as the 'learning environment', allowing workplaces to tie these factors to tangible practices and behaviors, rather than attempting to undergo dramatic cultural change. There is a large theoretical evidence base on learning culture, but there is less robust, controlled research that demonstrates its impact on organizational outcomes in practice."

Based on the identified components, the authors propose the following definition:

Culture of learning(individual learning or learning within organizations) is a learning macro-environment, consisting of many learning micro-environments (such as traditional and digital learning) formed by learning groups and subcultures (such as organizational culture, a culture of sharing, academic literacy, etc.) in constant interaction, using various approaches (such as learning from own experiences and errors; communicative learning; concept learning; project-based learning, etc.) and methods (such as evidence-based method of online learning and learning through research) to achieve successful outcomes based on learning values and traditions.

CONCLUSION

The reviewers come to the conclusion that although the concept of 'culture' has been researched for quite a long time, the studies of the last decade, unlike the studies carried out in the late 1990s of the 20th century, as well as the studies of the early 2000s, have not been able to provide a comprehensive overview of the concept of 'culture' and mostly do not contain its detailed definitions. The above-mentioned gaps in research allow us to consider the lack of a single definition of the concept of "culture of learning" as an opportunity to analyze its possible components, considering the trends in the development of modern educational processes. Thus, the reviewers determined that the research materials can be roughly divided into several periods characterized by certain trends in understanding the culture of learning which finally allowed to form a certain definition containing architectural components of different time periods. This, in turn, allows us to consider the culture of learning as a constantly changing and evolving environment, which contributes to the formation of an effective educational environment for individuals, professional communities and organizations.

The materials reviewed may not encompass all possible definitions and components of the "culture of learning" due to the limited sources available in the database. Only English-language articles and those available in open access were included in the study, which further narrows the range of sources. Therefore, the reviewers suggest conducting additional research using a broader range of materials from various data sources. Relevant studies might have been omitted because the review focused on a specific period covered by research articles and conference papers. Future research could address this by covering a more extended period. Another limitation stems from the exclusive use of English-language materials. However, the reviewers believe that including materials in other languages would likely have minimal impact on the study's overall findings, as English is the predominant language for publications in international journals.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Tatiana Laguttseva-Nogina: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing.

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

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Pedagogical Translanguaging – Elements in Language Teaching: Book Review

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Pedagogical Translanguaging – Elements in Language Teaching, by Jasone Cenoz and Durk Gorter, Cambridge University Press, 2022, 75pp., ISBN 978-1-009-01440-3

Translanguaging has become an important instructional approach to improving multilingual learners' linguistic competencies. However, not many schools have adopted multilingual pedagogies in their curricula due to monolingual ideologies (Cenoz & Gorter, 2022). In an increasingly globalised and diversified world, the monolingual teaching approach is no longer adapted to multilingual language classrooms. Therefore, the language teaching pedagogy available to educators and researchers in the fields of bilingualism and translingualism requires an update. *Pedagogical Translanguaging – Elements in Language Teaching,* written by Jasone Cenoz and Durk Gorter (2022), is a welcome response to this demand because it is designed for educational practitioners and aims to provide a framework for the pedagogical use of translanguaging, thereby activating multilingual learners' linguistic resources and repertoires. It presents a useful guide for novice teacher educators and researchers who may not be conversant with the concepts of bilingualism and multilingualism regarding the application of translanguaging pedagogy and the development of translanguaging theory.

The book is organised into six sections. Section 1 is an introductory chapter outlining the major ideas that will be addressed in each of the following sections. In Sections 2 through 5, the authors present a range of notions about pedagogical translanguaging in terms of its definition, origin, aims, characteristics, practices, and approaches to language assessment. The importance of sustainable translanguaging in protecting minority languages is also highlighted. The concluding chapter (Section 6), summarises the book's key points and proposes future perspectives.
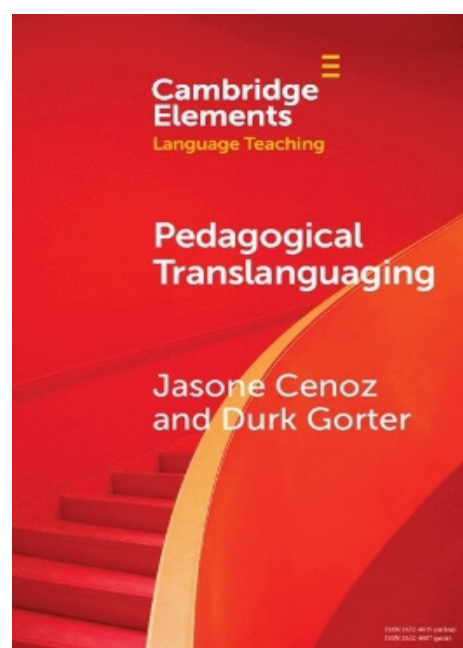
In the introductory section, the authors begin with a general overview of the scope of the book. They concisely define the notion of pedagogical translanguaging and explain that the purpose of the book is to provide a framework for pedagogical translanguaging. The authors also discuss the traditional monolingual approach and highlight the benefits of pedagogical translanguaging. The arguments enable readers to have a general idea of the translanguaging approach. Following this overview, the authors

elaborate on the content of each section to provide a panorama of what is to come.

In Section 2, 'What Is Translanguaging?', the authors focus on the origin of translanguaging and its aims, use, and extension in other situations. They first trace the original meaning of the term 'translanguaging' in Welsh bilingual education and then synthesise the ideas of scholars, expounding on the aims of this pedagogical practice, namely, to develop and strengthen students' oral and literacy skills in both their native language and English. Additionally, they distinguish between official and natural translanguaging and emphasise the importance of planning translanguaging activities systematically. [1]

In Section 3, 'What Is Pedagogical Translanguaging', the authors analyse three underlying dimensions of multilingualism—the multilingual speaker, the multilingual repertoire, and the social context—to highlight the advantages of being a multilingual speaker. They further define pedagogical translanguaging and explain the relevant elements concerning this concept, such as prior knowledge, scaffolding, and connected growers[2]. This provides a foundation for readers, particularly school teachers, to understand the core characteristics and ideas of pedagogical translanguaging. These characteristics include using this approach as a scaffold to activate multilingual speakers' prior knowledge, develope their multilingual repertoires, and identify connected growers that support one another.

Section 4, 'Metalinguistic Awareness, Pedagogical Translanguaging Practices, and Assessment', begins by advocating the development of metalinguistic awareness to improve multilingual learners' linguistic competence. It then describes four types of multilingual practices with different degrees of intensity, namely enhancing metalinguistic awareness, the use of learners' entire linguistic repertoire, integrated language curriculum, and translanguaging shifts. Depending on the educational context, these practices can be realised in a variety of ways. Finally, the discussion on multilingual and translanguaging perspectives encourages educators to explore potential multilingual approaches to student assessment.

Section 5, 'Minority Languages, Immersion, and CLIL', focuses on the conservation and development of minority languages in relation to pedagogical translanguaging. The authors posit that translanguaging takes place in multiple contexts. Hence, it is necessary to maintain and revitalise minority languages to make translanguaging sustainable.

Finally, Section 6, 'Conclusion and Future Perspectives', summarises the entire book. Themes are revisited, and the pressing challenges of pedagogical translanguaging are discussed, such as the evidence required for its implementation, the ways to sustain translanguaging, and the shortage of empirical studies in this field. As such, future research that examines the state of the art of pedagogical translanguaging is highly recommended.

Generally, this volume is an informative and practical must-read of the theory, implementation, and assessment of translanguaging. Three of its merits are particularly impressive. First, it challenges our traditional and established monolingual approaches and explores new ideas and innovative pedagogies in language education. Rather than simply theorising about this emerging concept, each section draws on relevant literature to explain translanguaging's operating theories and principles and to help readers understand its rationale, purposes, and advantages theoretically and pedagogically.

Second, this volume raises the issue of the sustainability of pedagogical translanguaging. It proposes some guiding principles for sustainable translanguaging, emphasising the need to preserve and revitalise minority languages. Given that the concept of sustainability in the educational realm has become a priority for educational reform in the past few decades, the advocacy of sustainable translanguaging aligns with educational philosophy and conforms to the trend of educational development. Adopting this perspective distinguishes this volume from similar titles in the field, making it stand out.

Third, the book contains reader-friendly features that facilitate readers' engagement. It is written in a clear and concise style and presents its arguments coherently and logically. For instance, each section concludes with a summary and a brief introduction to the following section to provide a smooth transition. Overall, it is a useful guide for policymakers and stakeholders in multilingual education who are keen to explore and adopt pedagogical translanguaging.

Additional ways of bolstering the contributions of this book to the theory and practice of pedagogical translanguaging might include the following:

First, to further advance the efficacy of translanguaging pedagogy and improve bilingual literacy, it is critical to address the methodological issues surrounding the representation and transcription of translanguaging data, particularly of oral language use. Determining how to repre-

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[1] Official translanguaging refers to an instructional strategy that is planned and systematic; natural translanguaging refers to the reality of bilingual usage in naturally occurring contexts, where boundaries between languages are fluid and constantly shifting (Cenoz & Gorter, 2022).

[2] Connected growers consider language development as a complex, nonlinear dynamic process (Larsen-Freeman, 2007). Each component of the linguistic system is called a 'grower'. Growers are mutually interdependent and interrelated (Cenoz & Gorter, 2022).

sent oral translanguaging through transcription presents a great challenge in the current research (García & Li, 2013). This challenge is further heightened by the fact that meaning-making through translanguaging typically involves multiple communicative modalities and relies on learners having a certain level of oral and written competency (García & Li, 2013). Given the scale of the challenge, exploring this curious and significant field is worthwhile.

Second, human languages have increasingly been recognised as highly multimodal, complex, and dynamic semiotic systems rather than sets of abstractable codes (Li, 2022). Translanguaging thus transcends not only the boundaries between languages, but also the boundaries between language and other semiotic systems for meaning- and sense-making (Li, 2022). The emphasis on this change in mindset in the remainder of the volume potentially enable researchers to build a new way of thinking and discussing languages and to combine translanguaging and multimodalities when investigating translanguaging projects in diverse multilingual educational contexts.

Third, the book could further strengthen its cases by incorporating the latest research on translanguaging approaches for multilingual learners. Such an addition would be particularly valuable if it included studies conducted in diverse cultural contexts, with learners at varied educational levels, with both minority and dominant languages, and with due recognition of community engagement and support.

DECLARATION OF COMPETING INTEREST

None declared.

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