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; Abong-dia, 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 therefore, 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>
<thead>
<tr>
<th>Criterion</th>
<th>Inclusion</th>
<th>Exclusion</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>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</td>
<td>All the studies outside the defined field</td>
<td>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</td>
</tr>
<tr>
<td>Concept</td>
<td>Definitions of learning culture (=culture of learning); mentioning and defining its components in the context of education</td>
<td>Other concepts relating to culture of learning</td>
<td>The aim of the review is to define trends, concepts and factors influencing the learning culture developing processes</td>
</tr>
<tr>
<td>Context</td>
<td>University learning culture, learning habits, learning environments, learning traditions, long-life learning (university period)</td>
<td>Culture of learning at other educational levels (kindergartens, schools, vocational education)</td>
<td>The review focuses on the learning culture within the university environment, and aims to define factors related to learning culture developing processes</td>
</tr>
<tr>
<td>Types of sources</td>
<td>Journal articles, reviews, conference papers</td>
<td>Unavailable sources, sources without full texts</td>
<td>The purpose of the review is to observe the most significant sources from a recognized scientific database</td>
</tr>
<tr>
<td>Language of publication</td>
<td>English</td>
<td>Other languages</td>
<td>English is used as a lingua franca of international research works providing the majority of scientific publications</td>
</tr>
<tr>
<td>Time period</td>
<td>2014-2024</td>
<td>Research works not related to the defined period</td>
<td>The review makes an attempt to define and study changing and developing processes in the concept of university “culture of learning” of nowadays</td>
</tr>
<tr>
<td>Country of publication</td>
<td>Any location</td>
<td>None</td>
<td>To get some understanding of the world tendencies</td>
</tr>
<tr>
<td>Database</td>
<td>Scopus</td>
<td>Other sources</td>
<td>The Scopus database is a recognized database of scientific research works with the sources being cited all over the world.</td>
</tr>
<tr>
<td>Areas of research</td>
<td>University education (as a Social Science area)</td>
<td>Other research areas</td>
<td>Learning culture is strictly connected with educational processes, and education itself is a discipline related to social sciences</td>
</tr>
</tbody>
</table>
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 (Winestone, 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**

Identification of studies for the review via databases

Records identified from*: Databases (n = 1540) Marker = "education"
Records removed before screening (n = 1142, in accordance with the new search markers)

Records screened (n = 398)
Duplicate records removed (n = 99)

Records sought for retrieval (n = 300)
Records not retrieved (n = 156)

Records assessed for eligibility (n = 144)
Records excluded in accordance with the inappropriate content (n = 70)

Records included in review (n = 74)

Figure 2
**Co-occurrence of the authors**

[Network diagram showing co-occurrence of authors]
Table 2

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of publications</th>
<th>Country</th>
<th>Number of publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>21</td>
<td>China</td>
<td>5</td>
</tr>
<tr>
<td>UK</td>
<td>10</td>
<td>Ecuador</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td>1</td>
<td>Cambodia</td>
<td>1</td>
</tr>
<tr>
<td>Finland</td>
<td>2</td>
<td>Singapore</td>
<td>1</td>
</tr>
<tr>
<td>Australia</td>
<td>7</td>
<td>Portugal</td>
<td>1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2</td>
<td>New Zealand</td>
<td>2</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2</td>
<td>South Africa</td>
<td>2</td>
</tr>
<tr>
<td>Zambia</td>
<td>1</td>
<td>South Korea</td>
<td>1</td>
</tr>
<tr>
<td>Jordan</td>
<td>1</td>
<td>The Netherlands</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>3</td>
<td>Italy</td>
<td>1</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>1</td>
<td>Romania</td>
<td>1</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1</td>
<td>Brazil</td>
<td>1</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>1</td>
<td>Croatia</td>
<td>1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1</td>
<td>Turkey</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3

<table>
<thead>
<tr>
<th>Effectiveness of teaching/learning processes</th>
<th>Effectiveness, online learning, process, social work, student, value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 2. Teaching/learning trends</td>
<td>Difference, educator, observation, reflection</td>
</tr>
<tr>
<td>Cluster 3. Learning model components</td>
<td>Competence, learning model, review, undergraduate student</td>
</tr>
<tr>
<td>Cluster 4. Academic literacy as a part of learning culture</td>
<td>Academic literacy, assessment, reading</td>
</tr>
<tr>
<td>Cluster 5. Learning style and processes connected with it</td>
<td>Learning style, strategy</td>
</tr>
</tbody>
</table>

Figure 3

Terms co-occurrence
Table 4
Distribution of the research trends within the culture of learning areas

<table>
<thead>
<tr>
<th>Cluster Arears/problems</th>
<th>Cluster/learning processes</th>
</tr>
</thead>
</table>
| 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 (Madianat et al., 2023); collaborative online international learning (Madianat 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).
| 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 (Mylykoski-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); |
| 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 (Duro 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 (Abongda et al., 2014); culture of learning in the context of measurement and evaluation (Sørensen et al., 2024); learner-centered teaching as a part of culture of knowledge (Milsted 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); |
| 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); |
| "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 (Findlay 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., 2019).

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 (Le Witt 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 contribute 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

<table>
<thead>
<tr>
<th>Culture of Learning defined (full or partial, implicit or explicit)</th>
<th>Extracted from</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ... learning within one cultural context – either abstract and lecture-based (i.e., graduate school) or hands-on and workplace-relevant (i.e., industry)</td>
<td>Hora, 2024</td>
</tr>
<tr>
<td>2 ... learning as developing and changing students’ conceptions</td>
<td>Winstone, 2022</td>
</tr>
<tr>
<td>3 ... applied, project-based learning to positive student outcomes</td>
<td>Balleisen et al., 2023</td>
</tr>
<tr>
<td>4 ... the co-constructed nature of learning</td>
<td>Culver et al., 2023</td>
</tr>
<tr>
<td>5 A new normal online/digital sustainable learning</td>
<td>Dziubaniuk et al., 2023</td>
</tr>
<tr>
<td>6 Customized learning</td>
<td>Dziubaniuk et al., 2023</td>
</tr>
<tr>
<td>7 ... learning is about discovering new concepts...</td>
<td>Utecht et al., 2019</td>
</tr>
<tr>
<td>8 Learning through experiencing the local way of life</td>
<td>Davis et al., 2023</td>
</tr>
<tr>
<td>9 Work-integrated learning with transition through activities</td>
<td>Ellis, 2022</td>
</tr>
<tr>
<td>10 Learning from personal encounter</td>
<td>Tan, 2023</td>
</tr>
<tr>
<td>11 Conventional and distance learning</td>
<td>Wong et al., 2023</td>
</tr>
<tr>
<td>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</td>
<td>Extracted from (Tagg, 2003) through Xie et al., 2023</td>
</tr>
<tr>
<td>13 Collaborative partnership learning using cross-cultural context</td>
<td>Liang et al., 2024</td>
</tr>
<tr>
<td>14 Learning through research culture</td>
<td>Heng, 2023</td>
</tr>
<tr>
<td>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.</td>
<td>Extracted from (Rubin, 2011) through Hackett et al., 2023</td>
</tr>
<tr>
<td>16 Entrepreneurship learning</td>
<td>Durão et al., 2023</td>
</tr>
<tr>
<td>17 ... ‘passive and teacher-centered teaching and learning style’ in a Vietnamese culture of learning</td>
<td>Yates et al., 2012</td>
</tr>
<tr>
<td>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)</td>
<td>Smith, 2005</td>
</tr>
<tr>
<td>19 the organizational culture is a part of culture of learning</td>
<td>Briody et al., 2019</td>
</tr>
<tr>
<td>20 developing an accountable culture of engaging and learning from patients, who are often underexplored sources of information.</td>
<td>Singh et al., 2020</td>
</tr>
<tr>
<td>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.</td>
<td>Vu et al., 2023</td>
</tr>
<tr>
<td>22 Power distance, uncertainty avoidance, collectivism vs individualism, masculinity vs femininity as key differences in Western and Asian cultures of learning</td>
<td>Findyartini et al., 2016</td>
</tr>
<tr>
<td>23 A patient-centered context for learning is a part of a culture of learning for medical students</td>
<td>Sims et al., 2016</td>
</tr>
<tr>
<td>24 Communication between professionals is a part of a learning culture in the sphere of medicine</td>
<td>Lipitz-Snyderman et al., 2017</td>
</tr>
</tbody>
</table>
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 (Dziubanik et al., 2023; Wong et al., 2023; Lindsell et al., 2021). The rise of blended learning, which combines 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 (Brody 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 (Brody 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.
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; Dziubanuk 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 main 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.

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

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

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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