

A Ten-Year Perspective of Bibliometric Analysis of Flipped Classroom in English as a Foreign Language (EFL) Context

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Received: April 26, 2024. Revised: November 11, 2024. Accepted: December 12, 2024. Published: February 25, 2025.

Abstract—This investigation examines the flipped classroom in English as a foreign language (EFL) context through a comprehensive analysis of 347 scholarly works from Scopus and Web of Science databases. A bibliometric analysis using VOSViewer and Excel applications revealed published designs, cross-border research partnerships, important scientific journals, important publications, and well-known and underdeveloped research fields. According to the findings, formal productivity increased significantly between 2020 and 2022 due to isolated learning transitions, with peak levels expected in 2020-2022. Chinese and Iranian scientists have become major contributors to improving fellowship on this informative site. Through co-citation studies, the research further discovers the most well-known journals and articles and highlights the research's areas of interest and underexplored themes through phrase co-occurrences. This study provides valuable insight for instructors, researchers, and education officials by advancing our understanding of key patterns in spun classrooms for English language teaching. This analysis comprehensively examines existing studies, synthesizes existing scientific developments, and provides thought-provoking directions for future research, expanding existing theoretical frameworks.

Keywords—flipped classroom, English as a foreign language (EFL), bibliometric analysis, scholarly works, co-citation studies, research partnerships

I. INTRODUCTION

In today's globalized world, English language proficiency is a crucial requirement and a basic component of success [1], [2]. Due to this recognition, many nations have begun instructional initiatives to increase English skills through foreign language programs, which has given English instruction a greater place in the world.

New technological advances have significantly impacted English language teaching methods, leading academics to look into new methods of instruction [3]. Compared to traditional,

instructor-led approaches, which have been shown to be more efficient in integrating digital tools into vocabulary classrooms [4], [5]. Over the past few years, there has been an increasing move toward rolled training as an efficient methodology for English language acquisition [6], providing a learner-concentrated framework that aligns with modern education needs [7].

This pedagogical model restructures traditional homework and class instruction models, pushing learning beyond bodily school boundaries [8]. In addition to addressing wedding challenges, direct instruction time concentrates on engaging in problem-solving exercises that foster substantial understanding construction and promote student exploration and metacognition [9], [10]. This restructuring improves scholar experience and time utilization efficiency by creating attractive learning environments centering on pupil needs [11], [12], [13].

The literature study indicates that the flipped classroom has garnered attention and popularity in EFL learning and instruction [14]. The application of the flipped classroom approach can potentially enhance students' language acquisition and engagement in the course EFL learning results [15], [16].

To fully comprehend the significance of flipped classrooms for EFL, it is crucial to thoroughly understand the existing research on flipped classroom studies in the EFL context. Notably, there is a lack of extensive research on implementing the flipped classroom approach in EFL instruction. While reviews investigating the flipped classroom in many educational fields have increased [17], [18], [19], [20], [21], none focuses on the use of flipped classroom in EFL context, which means there remains a scarcity of studies explicitly focusing on flipped classroom within EFL context, specifically in EFL context from a bibliometric standpoint.

This research holds substantial importance within its domain, as a bibliometric examination of the data gathered from prior scholarly works can pave the way for upcoming investigations and offer valuable perspectives to those in the field. The study is designed to graphically outline the academic terrain of a particular discipline, which will be achieved by analyzing the publication trend, international contributions and collaborations,

and most influential journals and articles, as well as identifying the topical foci in this domain and the underexplored research areas. Consequently, the study aimed to address the following research inquiries:

RQ 1. What is the publication trend on the research of flipped classrooms in EFL context?

RQ 2. What are the international contributions and collaboration on the research of flipped classrooms in EFL context?

RQ 3. What are the most influential journals and articles contributing to research on flipped classrooms in EFL context?

RQ 4. What topical foci in this domain have been most frequently studied and what are the underexplored research areas on flipped classrooms in EFL context?

II. LITERATURE REVIEW

A. *The Concept of the Flipped Classroom*

The concept of the flipped classroom, conceptualized in the 1990s, was formalized by [22], who introduced a structure wherein students engage with diverse pre-class materials such as textbook readings, films, and narrated PowerPoint presentations. This approach necessitates students' completion of pre-assigned tasks and viewing instructional videos instead of traditional lectures [23]. Consequently, classroom time is dedicated to cooperative learning activities and group problem-solving exercises to foster higher-order thinking skills [24], [25]. Previous studies showed that students find themselves willing to attend lectures involving interactive classroom teaching methods [26].

The flipped classroom was first adopted extensively by the Euro-American educational communities and is gaining traction in Asian universities [27]. It represents an emerging pedagogical innovation that redefines conventional classroom dynamics and enhances students' active learning capabilities [28]. Researchers also claim that the flipped classroom offers an alternative language instruction method that integrates technology, providing ample learning opportunities for students [29], [30]. In recent years, there has been a notable increase in enthusiasm and attention in flipped classrooms across all educational levels [31], and it is increasingly utilized in various educational contexts globally [32].

B. *Flipped Classroom in English as a Foreign Language (EFL) Context*

Research demonstrates the educational efficacy of spun instruction across a variety of academic fields [33], [34]. When applied to English language teaching, this methodology enhances educational outcomes and language development, promoting increased learner participation through various understanding activities [35].

Flipped learning environments, which support fast teacher guidance and promote deeper language development, increase opportunities for practical speech application through friend collaboration [36], [37]. Students demonstrate significant improvement in a variety of skills, including auditory

comprehension [38], grammar mastery [39], reading proficiency [40], writing expression [40], pronunciation accuracy [41], and general language ability [42].

III. METHODOLOGY

The methodology employs statistical bibliometric analysis to examine data and scientific developments relating to rolled schools in the EFL context. Using numerical metric analysis to visually represent extensive scientific literature on particular research areas, bibliometric investigation uses quantitative metrics [43], [44], [45]. This analytical platform has gained acclaim for evaluating scientific output, providing important insights into publication patterns, and comparing academic progress and study impact across scientific communities [46]. The analytical framework used throughout this inspection includes database selection criteria, book search criteria, information selection protocols, and scientific criteria.

A. *Database Selection*

The investigation utilized Scopus alongside the Web of Science (WOS) as the primary information repository for examining research questions. Bibliometric researchers typically exclude materials lacking indexing, such as grey literature and symposium papers, given concerns about academic credibility, peer review processes, and accessibility limitations. Although conference proceedings potentially contain valuable findings, their scholarly merit depends heavily on event prestige. Additionally, inconsistent publication and database inclusion restrict citation potential for conference materials.

WOS selection stemmed from its extensive journal indexing through SSCI, combined with its established position as a trusted bibliometric platform maintaining rigorous research standards [47]. Similarly, Scopus provides comprehensive access to peer-reviewed academic content, particularly within educational scholarship, earning recognition as a preeminent abstracting and indexing resource [48], [49]. These databases were chosen based on their academic prominence and thorough coverage of pertinent scholarly publications.

B. *Search Criteria*

The research methodology involved a systematic exploration of databases using two key search concepts: flipped classroom and English as a Foreign Language (EFL). The query was designed by incorporating these core terms along with their relevant synonyms to ensure thorough coverage of the literature.

The search was intended to encompass a broad spectrum of articles regarding studies conducted on flipped classrooms in the EFL context and obtain a comprehensive overview. It is crucial to include terms such as “inverted classroom” or “flipped learning” in the search query since flipped classroom is also known as inverted classroom [50], [51], [52]. The research did not include “blended learning” or “hybrid learning” in the Boolean search because they are not precisely equivalent concepts but have different pedagogy modes [53], [54]. As stated in Table I, the Boolean search expression was utilized

during the initial phase of data collection and dataset assembly.

Table I. The Boolean Expression

Database	Search String (Boolean expression)
Web of Science (WOS)	(TS=(("flipped classroom" OR "inverted classroom" OR "flipped EFL classroom" OR "flipped EFL course" OR "inverted EFL classroom" OR "inverted EFL course" OR "flipped learning" OR "flipped EFL learning" OR "flipped teaching" OR "flipped EFL teaching")) AND TS=("EFL" OR "EFL course" OR "EFL education" OR "English as a foreign language"))
SCOPUS	TITLE-ABS-KEY(("flipped classroom" OR "inverted classroom" OR "flipped EFL classroom" OR "flipped EFL course" OR "inverted EFL classroom" OR "inverted EFL course" OR "flipped learning" OR "flipped EFL learning" OR "flipped teaching" OR "flipped EFL teaching") AND("EFL" OR "EFL course" OR "EFL education" OR "English as a foreign language"))

C. Data Collection

The research adhered to the standardized procedures outlined by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), a guideline that has gained broad acceptance within the scholarly community. A thorough filtering process was applied in accordance with these standards. Figure 1 condenses and presents a visual representation of the step-by-step process, from the initial search to the final selection.

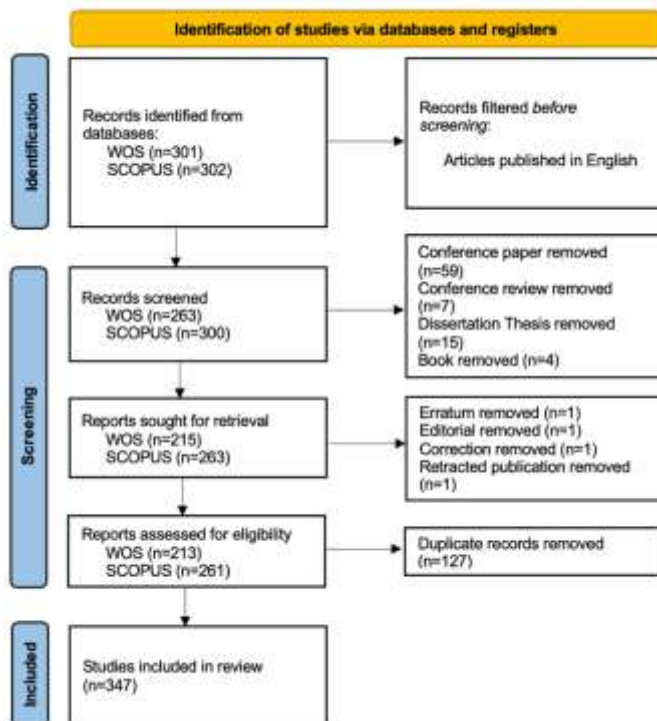


Fig. 1 Flow Diagram for Systematic Reviews (adapted from [55])

The search yielded 603 items (301 in WOS and 302 in Scopus) from two databases (15 August 2024). In the subsequent screening phase, the search criteria were restricted to materials published exclusively in English. As a result, the

corpus was reduced to a hybrid collection of 563 documents (263 in WOS and 300 in Scopus). Furthermore, the study specifically concentrated on articles, article reviews, and book chapters, as priority was given to peer-reviewed materials to guarantee the content’s quality. Conference papers, conference reviews, books, and dissertation theses were excluded from the filtering process. Following the screening process, 85 documents were excluded from the dataset. Subsequently, one erratum, one editorial, one correction, and one retracted article were removed, leaving 474 documents. Consequently, 347 papers were included for subsequent analysis in the study after 127 duplicates were removed.

D. Data Analysis

This research employed bibliometric analysis as its methodological approach to evaluate the scholarly output within the domain of flipped classrooms in the EFL setting. The bibliometric analysis provided valuable information regarding the trajectory of publications, the role of various countries in research, partnerships between different countries, key journals, and papers that have had a significant impact, as well as pinpointing the main themes of study and those areas that have yet to be thoroughly investigated. The information retrieved from the WOS and Scopus was formatted into Microsoft Excel spreadsheets and .csv files, which were manually merged into a new editable .csv file for subsequent processing and analysis.

Data analysis and visualization were conducted using Microsoft Excel and VOSviewer software. VOSviewer is a highly regarded program that specializes in generating visual maps and rendering bibliometric networks in a clear and understandable format. It is particularly efficient in handling large amounts of data and offers a variety of visual representations, analyses, and insights derived from the information it processes. Table II displays the essential information obtained from the dataset.

Table II. Essential Data Information from the Dataset

Description of the Essential Data Information	Results
Time	2014-2024
Total Documents	347
Countries	42
Sources	154
Authors	556

IV. RESULTS

A. Publication Trend

The research performance of flipped classrooms in the EFL context is assessed by analyzing the yearly distribution of published publications. Fig. 2 graphically illustrates the trend of publications during the last decade.

From 2014 to 2024, there is a clear upward trajectory in the number of publications, with a marked acceleration beginning around 2016. The initial low levels of publication suggest that the flipped classroom was a relatively novel concept in the EFL context at the time, likely reflecting early exploratory studies aimed at introducing the method to this specific educational

setting. The steady increase to 13 publications in 2016 and a sharp rise to 22 in 2017 indicates a growing acceptance and application of flipped classrooms.

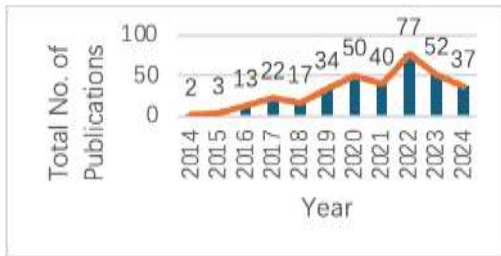


Fig. 2 Publication Trend

The continued publication rise, peaking at 77 in 2022, suggests intensive research activity. This surge likely reflects the urgent need for adaptable and effective teaching methods, with the flipped classroom offering a viable solution to the challenges posed by remote education. While the data for 2024 only covers the period up to 15 August 2024, with a lower figure than the previous years, the final documents could potentially rise, depending on the publication rate in the remaining months.

B. International Contributions and Collaborations

As for country contributions, hitherto, a total of 42 countries participated in research within this field, with China leading the pack at 69 publications, followed by Iran with 52, and Indonesia contributing 28 publications, marking them as the leading trio in terms of research output, and with China (1,775 citations), Iran (575 citations), and Turkey (486 citations) as the top three countries with most citations. Fig. 3 visually illustrates these findings by displaying the countries with the most considerable citations in this specific study subject.

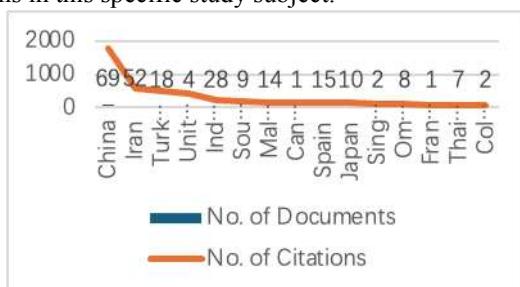


Fig. 3 Countries with the Highest Volume of Scholarly Publications

Compared with other countries, China is dominant, significantly outpacing the different countries in both metrics. This substantial contribution from China highlights the country’s strong emphasis on research and academic interest in exploring the flipped classroom in the EFL context. Iran emerges as the second-highest contributor, indicating a significant focus on research in this domain.

Notably, despite English being the native language in the United States, it still contributes to the research in this field, with four publications and 407 citations. Turkey and Indonesia, despite having fewer documents (18 and 28, respectively), still

manage to garner a notable number of citations, contributing significantly to this research field.

The network of country collaborations demonstrates that 28 countries have connected to other countries. The visualization in Fig. 4 exhibits seven distinct clusters, distinguished by color, which signify noteworthy international cooperation and the exchange of information across geographical borders in flipped classrooms in the EFL context.



Fig. 4 The Network Visualization Map of Country Collaboration

The most extensive cluster, represented by red, revolves around China, with Iran, Japan, the United States, and Malaysia as collaborating partners. Another prominent cluster centered around Iran, and its essential role in establishing cross-national relationships and pushing research initiatives in the Middle Eastern and South Asian contexts is evident as it involves countries from numerous areas. The graphical representation of the network precisely captures the global extent of scholarly endeavors in the field of flipped classrooms in the EFL context.

C. Most Influential Journals and Articles

From 2014 to 2024, 154 references were dedicated to flipped classrooms in the EFL context. Table III indicates that ten journals have garnered over 100 citations each. The leading journals in terms of citations are “Computer Assisted Language Learning,” “Educational Technology and Society,” and “Interactive Learning Environments.”

Table III. Most Influential Journals

Rank	Journal	No. C	No. Pub	APY	AC	JQ
1	Computer Assisted Language Learning	854	14	2021	61	Q1
2	Educational Technology and Society	402	4	2018	100.5	Q1
3	Interactive Learning Environments	266	7	2020	38	Q1
4	Education and Information Technologies	245	14	2021	17.5	Q1
5	Computers in Human Behavior	188	2	2016	94	Q1
6	Innovation in Language Learning and Teaching	155	6	2021	25.83	Q1
7	TESOL Quarterly	151	1	2018	151	Q1
8	Journal of Computers in Education	112	4	2020	28	Q1
9	British Journal of Educational Technology	107	2	2020	53.5	Q1
10	International Journal of Emerging Technologies in Learning	107	4	2020	26.75	/

Note. No. Pub=Number of Publications; No. C= Number of Citations; APY=Average Publication Year; AC=Average Citation; JQ=Journal Quartiles

The “Computer Assisted Language Learning” journal, amassing 854 citations across 14 articles, emerges as the most impactful. This result shows is pivotal to the development of flipped classrooms, primarily by merging language acquisition with technological tools. The “Educational Technology and Society” journal ranks as the second most frequently cited, garnering 402 citations from merely four articles, and boasts an outstanding Average Citations (AC) score of 100.5.

The data also emphasizes the key influence of some journals. The journal “International Journal of Emerging Technologies in Learning,” which had four articles and 107 citations, is omitted from the table since it was removed from Scopus in 2023. The enumerated journals exhibit differing levels of influence, with certain ones generating a substantial amount of relevant research and others, despite lower publication frequency, making significant contributions to the advancement of the subject. Further analysis of the most influential articles on flipped classrooms in the EFL context refers to the citations. Table IV shows that one article received over 300 citations, while seven received more than 100 citations.

Table IV. Article Citation Information

Citation Information	Total
Articles with 300+ citations	1
Articles with 100+ citations	7
Articles with 50+ citations	25
Total citations	4,420
Uncited articles	88

Table V presented the influential articles with more than 100 citations, and one article achieved over 300 citations.

Table V. Influential Articles with More than 100 Citations

Rank	Author(s)	Article Title	Year of Publication	Number of Citations
1	Chen Hsieh J.S.; Wu W.-C.V.; Marek M.W.	<i>Using the Flipped Classroom to Enhance EFL Learning</i>	2017	334
2	Turan Z.; Akdag-Cimen B.	<i>Flipped Classroom in English Language Teaching: A Systematic Review</i>	2020	186
3	Lee G.; Wallace A.	<i>Flipped Learning in the English as a Foreign Language Classroom: Outcomes and Perceptions</i>	2018	151
4	Wu W.V.; Hsieh J.S.C.; Yang J.C.	<i>Creating an Online Learning Community in a Flipped Classroom to Enhance EFL Learners' Oral Proficiency</i>	2017	143
5	Lin C.-J.; Hwang G.-J.	<i>A Learning Analytics Approach to Investigating Factors Affecting EFL Students' Oral Performance in a Flipped Classroom</i>	2018	116
6	Hung H.-T.	<i>Clickers in the Flipped Classroom: Bring your own Device (BYOD) to Promote Student Learning</i>	2017	103
7	Chen Hsieh J.S.; Huang Y.-M.; Wu W.-C.V.	<i>Technological acceptance of LINE in flipped EFL oral training</i>	2017	102

D. Topical Foci and Underexplored Research Areas

The occurrence of keywords was the main focus for analysis in bibliometric studies, and the VOSviewer was used to discover new trends and areas of research interest. Among the 686 keywords from 347 articles that were examined, 16 keywords met the inclusion threshold of being mentioned at least five times. As indicated by the node size, the top and central commonly used terms are “flipped classroom” with 188 occurrences, “EFL” with 60 occurrences, and “EFL learners” with 32 occurrences (Fig. 5)

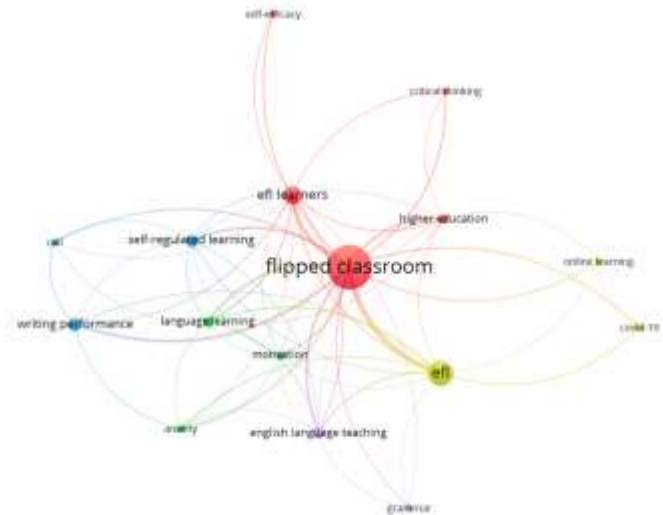


Fig. 5 Co-occurrence network of keywords (occurrence threshold ≥ 5)

The most prominent keywords include the cluster of nodes related to learner autonomy and affective factors, including “self-regulated learning,” “motivation,” and “self-efficacy”. This grouping suggests that current research delves into how flipped classrooms may foster independent learning skills and enhance student engagement in language acquisition processes. The inclusion of “critical thinking” as a related element suggests that researchers are examining the capacity of flipped classes to enhance higher-order cognitive abilities in EFL learners.

The network also emphasizes the technology components of the flipped classroom, as indicated by the keyword “online learning.” This connection, especially regarding the keyword “COVID-19,” illustrates the flexibility of the flipped classroom in adapting to the abrupt transition to remote learning during the pandemic.

The network offers significant insights into contemporary research trends while revealing potential underexplored research areas in the literature. The existence of nodes like “writing performance” and “grammar” emphasizes particular language competencies, but the lack of nodes for speaking or listening abilities implies that these domains may be insufficiently examined. This observation indicates chances for future research to encompass a broader spectrum of linguistic competencies. Furthermore, the network’s structure implies a need for more integrated research approaches that connect multiple aspects of language learning within the flipped

classroom paradigm. Future studies could benefit from exploring the interplay between different nodes more deeply.

V. DISCUSSION

A. Publication Trend

The scarcity of research on the flipped classroom in the EFL context during 2014 and 2015, with only two publications in 2014 by [56] and [57] centered on Chinese university EFL courses, indicates that this pedagogical method is still in its initial phases in the EFL context. The rise in publications started in 2019, and the significant increase in 2022 happened at the same time as the beginning of the Covid-19 pandemic. The significant repercussions of the coronavirus, impacting all nations and sectors, affected approximately 91% of the global student population, prompting educational institutions to enhance their preparedness for potential future emergencies necessitating the implementation of remote learning [58]. This pandemic caused disruptions in traditional classrooms and led to faster adoption of remote and online learning methods worldwide [59], [60], and the flipped classroom also emerged as a promising pedagogical approach [61], aligns with advancements in the field of information and communication technology [62]. Flipped classrooms serve as a flexible and efficient pedagogical approach, addressing the issues posed by remote learning. The increasing trend indicates that flipped classrooms as an instructional strategy have gained popularity and are being implemented in the EFL educational context.

The decline and anticipated decline in publications for 2023 and 2024 might indicate a temporary stabilization or change in research emphasis when educational institutions return to conventional classroom settings. The lessons learned from educational adaptations during the global health crisis, especially regarding the benefits of flipped classrooms, are likely to persistently impact pedagogical practices and continue to drive further research across diverse linguistic and sociocultural contexts.

Current scholarship on flipped classrooms in English language teaching reflects growing academic interest, emphasizing the demand for pedagogical innovation and recognizing the educational value of this instructional model. Future research may explore how flipped classrooms perform across different institutional settings and learning environments, while also developing enhanced strategies to optimize instructional effectiveness.

B. International Contributions and Collaborations

Research outcomes indicate substantial scholarly contributions from Chinese and Iranian academics examining flipped classrooms in English language instruction. The predominance of Chinese publications and citation metrics reflects considerable institutional investment in this pedagogical approach, corresponding with national initiatives promoting innovative English teaching practices [63], [64]. International collaboration, as seen in partnership mapping, emphasizes the critical role of global academic cooperation in

advancing this field.

The basic value of knowledge exchange is demonstrated by the rise of global research clusters, particularly those involving Iranian fellowships. These patterns demonstrate how cross-cultural scientific partnerships combine different theoretical viewpoints, optimize resources, and offer diverse validation for teaching strategies [65]. Researchers and academic institutions collaborate to handle application issues while maximizing opportunities in spun English language learning environments through strategic studies collaborations and shared experience [66].

C. Most Influential Journals and Articles

The main venues for publishing scientific publications are "Computer Assisted Language Learning," "Educational Technology and Society," and "Interactive Learning Environments." These findings show how electronic innovations and language pedagogy in spun classrooms cross, giving rise to broader shifts toward engaging, technology-mediated educational methods.

The breadth of Research on rolled classrooms can be seen in the numerous publication options that are present in usually referenced works. This diversity enriches intellectual discourse and functional classroom implementation strategies by incorporating a variety of theoretical frameworks and technical perspectives [67].

Examining reference patterns provides significant knowledge of the intellectual effect of the flipped classroom in the EFL context. The variation in the number of citations suggests that different levels of control are present in different published studies [68]. The constant presence of some scientists, especially points to the rise of well-known scholars whose ongoing efforts have significantly improved the field's collective knowledge.

D. Topical Foci and Underexplored Research Areas

Analyzing keyword co-occurrence reveals trends and thematic clusters within the scholarship on EFL-based flipped classrooms. The concentration of terminology related to specific linguistic abilities, particularly writing skills and grammatical competence, demonstrates researchers' attention to how flipped classrooms influence distinct language components. Supporting this observation, [69] point out the extensive scholarly exploration of positive outcomes, such as conceptual mapping techniques, in enhancing written expression in English language acquisition through flipped classrooms.

Researchers also argued that the flipped classroom influenced the development of writing abilities [70]. The flipped classroom in an EFL context can lead to better academic performance because the integration of video-based interactive and collaborative learning, peer assistance, and appropriate tasks has been proven in the classroom [71].

The absence of nodes associated with speaking or listening skills indicates that these areas may not have been thoroughly examined. The findings suggest significant opportunities to

broaden research across diverse language proficiency domains. Analysis of the interconnected relationships points toward the need to develop more comprehensive investigative approaches that integrate multiple aspects of language development within flipped learning environments. Such holistic methodologies would facilitate a deeper understanding of how various linguistic competencies interact and evolve through flipped classroom instruction.

Future research may gain from a more thorough investigation of the interactions across various nodes, such as examining the impact of flipped classrooms on improving the four skills: listening, speaking, reading, and writing.

Additionally, topical foci such as anxiety and EFL learners, perceptions, and attitudes of EFL learners towards the flipped classroom need a thorough examination to determine the difficulties and possibilities for incorporating the flipped classroom in the EFL context.

Another area of considerable study focus is “self-regulated learning” and “motivation”, which has proven effective in the flipped classroom, illustrating that current research explores how flipped classrooms can foster independent learning skills and enhance student engagement in the language acquisition process. The connection between “self-regulated learning” and “motivation” suggests that flipped classrooms enhance students’ intrinsic motivation by facilitating self-regulated learning, thereby strengthening learning efficacy. This relationship offers educators practical outcomes for improving student motivation through the design of instructional activities that foster self-regulated learning since scholars strongly advocate for developing EFL learners’ self-regulated learning in the flipped classroom [72]. Considering the rising significance of self-regulated learning within today’s educational setting, an expanding collection of research [73], [74], [75], [76], [77] has underscored the advantages of incorporating self-regulated learning to enhance students’ academic achievement, advocating for EFL educators to integrate this approach into their teaching methods.

In addition, the emergence of “critical thinking” as a connecting node further suggests that researchers are investigating the potential of flipped classrooms to promote higher-order cognitive skills in EFL learners. This point has important pedagogical implications for educators as it highlights the role of flipped classrooms in developing students’ critical thinking skills.

The keywords “online learning” and “COVID-19” in the network reveal a focus on the technological aspects of the flipped classroom and the need and appropriateness of examining flipped classroom practices in the context of the pandemic. Previous studies have shown a significant increase in e-learning research in recent years, underscoring the importance of sustaining students’ learning. Nevertheless, it is crucial to thoroughly assess the durability and long-term consequences of the flipped classroom beyond the current crisis, considering the possibility of enduring changes in educational practices. This is critical for educators as it demonstrates the flexibility and

effectiveness of the flipped classroom model in the face of changes in the educational environment.

VI. LIMITATIONS

Although a thorough analysis of the flipped classroom in an EFL context has been provided, some limitations must remain acknowledged. By revealing the philosophical framework of a knowledge center, providing a unique perspective, and enhancing these methods, which evaluate the value and incorporate findings within a broader book, bibliometric analysis complements research synthesis and meta-analysis. The choice criteria used to choose articles have another drawback. The study significantly expanded our understanding of how flipped rooms function in the EFL context while accepting the limitations of the study’s findings and fresh perspectives on EFL-based flipped rooms.

VII. CONCLUSION

This detailed study provides valuable insight into implementing the flipped classroom within English language teaching. The growing fellowship in this field highlights the growing intellectual interest and opportunities for applying this pedagogical approach. To increase the flexibility and efficiency of rolled methodologies globally, the study emphasizes developing international collaborative networks to produce international experience. Significant formal contributions from Chinese and Iranian scientists possibly correlate with these nations’ academic policies promoting technological innovation and language teaching advancement. Cross-border partnerships enable a deeper understanding of flipped classroom effectiveness within various social and administrative frameworks, facilitating context-specific adaptations. With the contributions of Chen Hsieh et al., important scientific publications include articles like “Computer Assisted Language Learning,” “Educational Technology and Society,” and “Interactive Learning Environments” which are particularly important. Along with technology integration and the resilience of distance education, a study of keyword trends reveals a strong focus on cognitive factors, such as self-regulated learning, student engagement, motivation, and self-efficacy. These psychological components play a significant role in shaping the teaching experience and significantly affect educational outcomes.

Future studies can further examine how these psychological factors interact with the instructional design of rolled schools and how to improve these psychological factors through training strategies to improve learning effects. In addition, this study provides new directions for future investigation, particularly how to incorporate the production of these abilities into the flipped classroom and assess the impact of rolled classrooms on developing these skills. It also highlights the comparative monitoring of flipped classroom studies’ speaking, listening, and checking skills. This may include improvements in the material and methods of flipped classroom training and thoroughly examining learners’ language skill development.

In conclusion, the study of rolled classrooms in EFL knowledge is moving more comprehensively. Future research must focus on the mental effects of training techniques, the breadth of skill acquisition, and the hopes for international collaboration, which are essential components for research in this field.

ACKNOWLEDGMENT

The author contributed to the article and approved the submitted version.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work the author used ChatGPT in order to assist with refining content. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

References

- [1] Chen Hsieh, J. S., Wu, W.-C. V., & Marek, M. W. (2017). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning*, 30(1-2), 1–21. <https://doi.org/10.1080/09588221.2015.1111910>
- [2] Wu, W.-C. V., Yang, J. C., Scott Chen Hsieh, J., & Yamamoto, T. (2020). Free from demotivation in EFL writing: the use of online flipped writing instruction. *Computer Assisted Language Learning*, 33(4), 353–387. <https://doi.org/10.1080/09588221.2019.1567556>
- [3] Chuang, H.-H., Weng, C.-Y., & Chen, C.-H. (2018). Which students benefit most from a flipped classroom approach to language learning? *British Journal of Educational Technology*, 49(1), 56–68. <https://doi.org/10.1111/bjet.12530>
- [4] Mehring, J. (2016). Present Research on the Flipped Classroom and Potential Tools for the EFL Classroom. *Computers in the Schools*, 33(1), 1–10. <https://doi.org/10.1080/07380569.2016.1139912>
- [5] Turan, Z., & Akdag-Cimen, B. (2020). Flipped classroom in English language teaching: a systematic review. *Computer Assisted Language Learning*, 33(5-6), 1–17. <https://doi.org/10.1080/09588221.2019.1584117>
- [6] Çakiroğlu, Ü., & Öztürk, M. (2023). Microanalytic evaluation of students' self-regulated learning in flipped EFL instruction. *Journal of Computing in Higher Education*, 36(3), 591–618. <https://doi.org/10.1007/s12528-023-09368-z>
- [7] Gilboy, M. B., Heinerichs, S., & Pazzaglia, G. (2015). Enhancing Student Engagement Using the Flipped Classroom. *Journal of Nutrition Education and Behavior*, 47(1), 109–114. <https://doi.org/10.1016/j.jneb.2014.08.008>
- [8] Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. International Society for Technology in Education.
- [9] Burke, A. S., & Fedorek, B. (2017). Does “flipping” promote engagement?: A comparison of a traditional, online, and flipped class. *Active Learning in Higher Education*, 18(1), 11–24. <https://doi.org/10.1177/1469787417693487>
- [10] Mengual-Andrés, S., López Belmonte, J., Fuentes Cabrera, A., & Pozo Sánchez, S. (2019). Modelo estructural de factores extrínsecos influyentes en el flipped learning. *Educación XX1*, 23(1), 75–101. <https://doi.org/10.5944/educxx1.23840>
- [11] Adnan, M. (2017). Perceptions of senior-year ELT students for the flipped classroom: a materials development course. *Computer Assisted Language Learning*, 30(3-4), 204–222. <https://doi.org/10.1080/09588221.2017.1301958>
- [12] Nolan, E., Brady, M., Rienties, B., & Héliot, Y. (2021). Once more on the rollercoaster: Loses and gains from the rapid shift to online delivery during Covid. *Academy of Management Proceedings*, 2021(1), 15358. <https://doi.org/10.5465/ambpp.2021.15358abstract>
- [13] Strelan, P., Osborn, A., & Palmer, E. (2020). The flipped classroom: A meta-analysis of effects on student performance across disciplines and education levels. *Educational Research Review*, 30(1), 100314. <https://doi.org/10.1016/j.edurev.2020.100314>
- [14] Wang, J., An, N., & Wright, C. (2018). Enhancing beginner learners' oral proficiency in a flipped Chinese foreign language classroom. *Computer Assisted Language Learning*, 31(5-6), 490–521. <https://doi.org/10.1080/09588221.2017.1417872>
- [15] Haghighi, H., Jafarigohar, M., Khoshshima, H., & Vahdany, F. (2019). Impact of flipped classroom on EFL learners' appropriate use of refusal: achievement, participation, perception. *Computer Assisted Language Learning*, 32(3), 1–33. <https://doi.org/10.1080/09588221.2018.1504083>
- [16] Han, Y. J. (2015). Successfully flipping the ESL classroom for learner autonomy. *NYS Tesol journal*, 2(1), 98–109. <https://journal.nystesol.org/index.php/NYSTJ/article/view/153>
- [17] Betihavas, V., Bridgman, H., Kornhaber, R., & Cross, M. (2016). The evidence for “flipping out”: A systematic review of the flipped classroom in nursing education. *Nurse Education Today*, 38(1), 15–21. <https://doi.org/10.1016/j.nedt.2015.12.010>
- [18] Karabulut-İlgu, A., Jaramillo Cherez, N., & Jähren, C. T. (2018). A systematic review of research on the flipped learning method in engineering education. *British Journal of Educational Technology*, 49(3), 398–411. <https://doi.org/10.1111/bjet.12548>
- [19] Lo, C. K., & Hew, K. F. (2017). A critical review of flipped classroom challenges in K-12 education: possible solutions and recommendations for future research. *Research and Practice in Technology Enhanced Learning*, 12(1), 1–22. <https://doi.org/10.1186/s41039-016-0044-2>
- [20] O’Flaherty, J., Phillips, C., Karanicolas, S., Snelling, C., & Winning, T. (2015). Corrigendum to “The use of flipped classrooms in higher education: A scoping review” [The Internet and Higher Education 25 (2015) 85–95]. *The Internet and Higher Education*, 27(1), 90. <https://doi.org/10.1016/j.iheduc.2015.05.001>

- [21] Seery, M. K. (2015). Flipped learning in higher education chemistry: emerging trends and potential directions. *Chemistry Education Research and Practice*, 16(4), 758–768. <https://doi.org/10.1039/c5rp00136f>
- [22] Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *Journal of Economic Education*, 31(1), 30-43. <https://doi.org/10.1080/00220480009596759>
- [23] Davies, R. S., Dean, D. L., & Ball, N. (2013). Flipping the classroom and instructional technology integration in a college-level information systems spreadsheet course. *Educational Technology Research and Development*, 61(4), 563-580. <https://doi.org/10.1007/s11423-013-9305-6>
- [24] Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. *ASEE Annual Conference and Exposition, Conference Proceedings. Atlanta, Georgia*. <https://doi.org/10.18260/1-2--22585>
- [25] Winter, J. W. (2018). Performance and Motivation in a Middle School Flipped Learning Course. *TechTrends*, 62(2), 176–183. <https://doi.org/10.1007/s11528-017-0228-7>
- [26] Rovena Vangjel, Mateus Habili, & Arjan Abazi. (2023). The Role and the Impact of Interactive Teaching Methods in Increasing Students' Interest for the Field They Study (Case Study Master of Scientific Marketing Faculty of Economics University of Tirana Year 2018-2019, 2019-2020). *International Journal of Education and Information Technologies*, 17(1), 21–31. <https://doi.org/10.46300/9109.2023.17.3>
- [27] Kvashnina, O. S., & Martynko, E. A. (2016). Analyzing the potential of flipped classroom in ESL teaching. *International Journal of Emerging Technologies in Learning*, 11(3), 71. <https://doi.org/10.3991/ijet.v11i03.5309>
- [28] Zainuddin, Z., Habiburrahim, H., Muluk, S., & Keumala, C. M. (2019). How do students become self-directed learners in the EFL flipped-class pedagogy? A study in higher education. *Indonesian Journal of Applied Linguistics*, 8(3), 678. <https://doi.org/10.17509/ijal.v8i3.15270>
- [29] Hung, H. T. (2015). Flipping the classroom for English language students to foster active learning. *Computer Assisted Language Learning*, 28(1), 81-96. <https://doi.org/10.1080/09588221.2014.967701>
- [30] McLaughlin, J. E., Roth, M. T., Glatt, D. M., Gharkholonarehe, N., Davidson, C. A., Griffin, L. M., Esserman, D. A., & Mumper, R. J. (2014). The flipped classroom: A course redesign to foster learning and engagement in a health professions school. *Academic Medicine*, 89(2), 236-243. <https://doi.org/10.1097/ACM.0000000000000086>
- [31] Hung, H.-T. (2017). Clickers in the flipped classroom: bring your own device (BYOD) to promote student learning. *Interactive Learning Environments*, 25(8), 983–995. <https://doi.org/10.1080/10494820.2016.1240090>
- [32] Vaughan, M. (2014). Flipping the learning: An investigation into the use of the flipped classroom model in an introductory teaching course. *Education, Research and Perspectives*, 41(1), 25–41. <https://doi.org/10.70953/erpv41.14002>
- [33] Lai, C.-L., & Hwang, G.-J. (2016). A self-regulated flipped classroom approach to improving students' learning performance in a mathematics course. *Computers & Education*, 100, 126–140. <https://doi.org/10.1016/j.compedu.2016.05.006>
- [34] Hwang, G.-J., Lai, C.-L., & Wang, S.-Y. (2015). Seamless flipped learning: a mobile technology-enhanced flipped classroom with effective learning strategies. *Journal of Computers in Education*, 2(4), 449–473. <https://doi.org/10.1007/s40692-015-0043-0>
- [35] Chen, M. R. A., & Hwang, G. J. (2020). Effects of a concept mapping- based flipped learning approach on EFL students' English-speaking performance, critical thinking awareness and speaking anxiety. *British Journal of Educational Technology*, 51(3), 817–834. <https://doi.org/10.1111/bjet.12887>
- [36] Basal, A. (2015). The implementation of a flipped classroom in foreign language teaching. *Turkish Online Journal of Distance Education*, 16(4), 28-37. <https://doi.org/10.17718/tojde.72185>
- [37] Sung, K. (2015). A Case Study on a Flipped Classroom in an EFL Content Course. *Multimedia-Assisted Language Learning*, 18(2), 159–187. <https://doi.org/10.15702/mall.2015.18.2.159>
- [38] Ahmad, S. Z. (2016). The Flipped Classroom Model to Develop Egyptian EFL Students' Listening Comprehension. *English Language Teaching*, 9(9), 166. <https://doi.org/10.5539/elt.v9n9p166>
- [39] Al-Harbi, S. S., & Alshumaimeri, Y. A. (2016). The Flipped Classroom Impact in Grammar Class on EFL Saudi Secondary School Students' Performances and Attitudes. *English Language Teaching*, 9(10), 60. <https://doi.org/10.5539/elt.v9n10p60>
- [40] Huang, Y.-N., & Hong, Z.-R. (2016). The effects of a flipped English classroom intervention on students' information and communication technology and English reading comprehension. *Educational Technology Research and Development*, 64(2), 175–193. <https://doi.org/10.1007/s11423-015-9412-7>
- [41] Zhang, H., Du, X., Yuan, X., & Zhang, L. (2016). The Effectiveness of the Flipped Classroom Mode on the English Pronunciation Course. *Creative Education*, 07(09), 1340–1346. <https://doi.org/10.4236/ce.2016.79139>
- [42] Wu, W. C. V., Hsieh, J. S. C., & Yang, J. C. (2017). Creating an online learning community in a flipped classroom to enhance EFL learners' oral proficiency. *Journal of Educational Technology & Society*, 20(2), 142-157. <https://eric.ed.gov/?id=EJ1137524>
- [43] Baker, H. K., Kumar, S., & Pandey, N. (2020). A bibliometric analysis of managerial finance: a

- retrospective. *Managerial Finance*, 46(11), 1495–1517. <https://doi.org/10.1108/mf-06-2019-0277>
- [44] Van Eck, N. J., & Waltman, L. (2020). Visualizing bibliometric networks. In *Measuring scholarly impact: Methods and practice* (pp. 285-320). Cham: Springer International Publishing.
- [45] Zupic, I., & Čater, T. (2015). Bibliometric Methods in Management and Organization. *Organizational Research Methods*, 18(3), 429–472. <https://doi.org/10.1177/1094428114562629>
- [46] Glänzel, W. (2012). Bibliometric methods for detecting and analyzing emerging research topics. *El Profesional de La Informacion*, 21(2), 194–201. <https://doi.org/10.3145/epi.2012.mar.11>
- [47] Thamer Al-Rousan, & Abualese, H. (2024). E-Learning Impact on Higher Education Institutions during COVID-19 Pandemic: A Bibliometric Analysis. *International Journal of Education and Information Technologies*, 18, 98–104. <https://doi.org/10.46300/9109.2024.18.10>
- [48] Ballew, B. S. (2009). Elsevier's Scopus® Database. *Journal of Electronic Resources in Medical Libraries*, 6(3), 245–252. <https://doi.org/10.1080/15424060903167252>
- [49] Can, Y., & Hou, A. Y. C. (2021). Science mapping in the research of higher education internationalization from 2013 to 2018 in Asia: publications, regional networking and future trends. *Higher Education Evaluation and Development*, 15(1), 35–52. <https://doi.org/10.1108/heed-11-2020-0048>
- [50] Al-Abdullatif, A. M. (2020). Investigating self-regulated learning and academic achievement in an eLearning environment: The case of K-12 flipped classroom. *Cogent Education*, 7(1), 1835145. <https://doi.org/10.1080/2331186x.2020.1835145>
- [51] Gannod, G. C. (2007). Work in progress — Using podcasting in an inverted classroom. *Annual Frontiers in Education Conference. Milwaukee, WI, USA*. <https://doi.org/10.1109/fie.2007.4418119>
- [52] Jdaitawi, M. (2019). The Effect of Flipped Classroom Strategy on Students Learning Outcomes. *International Journal of Instruction*, 12(3), 665–680. <https://eric.ed.gov/?id=EJ1220207>
- [53] Kim, N.-Y., & Yoon, S. Y. (2021). A Comparative Study on Blended Learning and Flipped Learning: EFL Students' Learner Autonomy, Independence, and Attitudes. *Korean Journal of English Language and Linguistics*, 21, 171–188. http://journal.kasell.or.kr/_PR/view/?aidx=28500&bidx=2451
- [54] Greener, S. (2015, June). Flipped or Blended? What's the Difference and Does it Make a Difference to Learning in HE?. In *International Conference on e-Learning* (p. 146). *Belgrade Metropolitan University*. Academic Conferences International Limited.
- [55] Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., & McGuinness, L. A. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *International Journal of Surgery*, 88, 105906. <https://doi.org/10.1016/j.ijssu.2021.105906>
- [56] Webb, M., Doman, E., & Pusey, K. (2014). Flipping a Chinese university EFL course: What students and teachers think of the model. *The Journal of Asia TEFL*, 11(4), 53-87.
- [57] Liao, P. (2014). Flipped Learning: Integrating Community Language Learning with Facebook via Computer and Mobile Technologies to Enhance Learner Language Performances in Taiwan. *Communications in Computer and Information Science*, September (13-14), 92–101. https://doi.org/10.1007/978-3-662-45071-0_8
- [58] Oluwatobi Dorcas Adelowo, Allo, T. A., & George, T. (2023). Electro-Learning amidst Covid-19 Lockdown and Related Challenges of Undergraduates in Nigerian Universities. *International Journal of Education and Information Technologies*, 17, 73–80. <https://doi.org/10.46300/9109.2023.17.9>
- [59] Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. Sagepub. <https://doi.org/10.1177/0047239520934018>
- [60] Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science and Education*, 2(1), 923-945. <https://doi.org/10.1007/s42438-020-00155-y>
- [61] Bergmann, J., & Sams, A. (2014). *Flipped Learning: Gateway to Student Engagement*. International Society for Tech in Ed.
- [62] Ehlers, U.-D., & Kellermann, S. A. (2019). Future Skills and Higher Education “Future Skill Readiness.” *EDEN Conference Proceedings, Bruges, Belgium, 1*, 85–96. <https://doi.org/10.38069/edenconf-2019-ac-0011>
- [63] Fang, F. (Gabriel). (2018). Review of English as a medium of instruction in Chinese universities today: current trends and future directions. *English Today*, 34(1), 32–37. <https://doi.org/10.1017/s0266078417000360>
- [64] Lei, L., & Qin, J. (2022). Research in foreign language teaching and learning in China (2012–2021). *Language Teaching*, 55(4), 506–532. <https://doi.org/10.1017/s0261444822000155>
- [65] Freshwater, D., Sherwood, G., & Drury, V. (2006). International research collaboration. *Journal of Research in Nursing*, 11(4), 295–303. <https://doi.org/10.1177/1744987106066304>
- [66] Zainuddin, Z., & Perera, C. J. (2019). Exploring Students' Competence, Autonomy and Relatedness in the Flipped Classroom Pedagogical Model. *Journal of Further and*

- Higher Education*, 43(1), 1–12. <https://doi.org/10.1080/0309877x.2017.1356916>
- [67] Lee, G., & Wallace, A. (2018). Flipped learning in the English as a foreign language classroom: Outcomes and perceptions. *TESOL Quarterly*, 52(1), 62–84. <https://doi.org/10.1002/tesq.372>
- [68] Larivière, V., Kiermer, V., MacCallum, C. J., McNutt, M., Patterson, M., Pulverer, B., ... & Curry, S. (2016). A simple proposal for the publication of journal citation distributions. *BioRxiv*, 062109. <https://www.biorxiv.org/content/10.1101/062109v1>
- [69] Hwang, G.-J., Chen, M.-R. A., Sung, H.-Y., & Lin, M.-H. (2019). Effects of Integrating a Concept Mapping-Based Summarization Strategy into Flipped Learning on Students' Reading Performances and Perceptions in Chinese Courses. *British Journal of Educational Technology*, 50(5), 2703–2719. <https://doi.org/10.1111/bjet.12708>
- [70] Engin, M., & Donanci, S. (2016). Instructional videos as part of a “flipped” approach in academic writing. *Learning and Teaching in Higher Education: Gulf Perspectives*, 13(1), 73-80. <https://doi.org/10.18538/lthe.v13.n1.231>
- [71] Yavuz, F., & Ozdemir, S. (2019). Flipped classroom approach in EFL context: Some associated factors. *World Journal on Educational Technology: Current Issues*, 11(4), 238–244. <https://doi.org/10.18844/wjet.v11i4.4296>
- [72] Rasheed, R. A., Kamsin, A., Abdullah, N. A., Kakudi, H. A., Ali, A. S., Musa, A. S., & Yahaya, A. S. (2020). Self-Regulated Learning in Flipped Classrooms: A Systematic Literature Review. *International Journal of Information and Education Technology*, 10(11), 848–853. <https://doi.org/10.18178/ijiet.2020.10.11.1469>
- [73] Van Alten, D. C. D., Phielix, C., Janssen, J., & Kester, L. (2020). Effects of self-regulated learning prompts in a flipped history classroom. *Computers in Human Behavior*, 108, 106318. <https://doi.org/10.1016/j.chb.2020.106318>
- [74] Li, J., Ye, H., Tang, Y., Zhou, Z., & Hu, X. (2018). What Are the Effects of Self-Regulation Phases and Strategies for Chinese Students? A Meta-Analysis of Two Decades Research of the Association Between Self-Regulation and Academic Performance. *Frontiers in Psychology*, 9(Issue DEC), 2434. <https://doi.org/10.3389/fpsyg.2018.02434>
- [75] Midun, H., Degeng, N., Kuswandi, D., & Ulfa, S. (2019). Effects of Inverted Classroom and Self-Regulated Learning on Conceptual Learning. *International Journal of Innovation, Creativity and Change. Www.ijicc.net*, 8(2), 181-200. https://www.ijicc.net/images/vol8iss2/8212_Midun_2019_E_R.pdf
- [76] Kusuma, I. P. I. (2020). The Investigation of Flipped Classrooms on Students' Speaking Performance and Self-regulated Learning. *Pertanika Journal of Social Sciences and Humanities*, 28(3), 2027-2042.
- [77] Roth, A., Ogrin, S., & Schmitz, B. (2016). Assessing self-regulated learning in higher education: a systematic literature review of self-report instruments. *Educational Assessment, Evaluation and Accountability*, 28(3), 225–250. <https://doi.org/10.1007/s11092-015-9229-2>

Contribution of individual authors to the creation of a scientific article (ghostwriting policy)

Linling Zhong did the writing, revising, and editing in this study.

Sources of funding for research presented in a scientific article or scientific article itself

Zhejiang Shuren University

Conflicts of Interest

The author has no conflicts of interest to declare that are relevant to the content of this article.

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