

## A systematic review on the effect of lesson study on entrepreneurial competencies of foreign language teachers

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**Abstract:** The objective of this study is to analyze literature research on the lesson study model of English teachers and their entrepreneurship competencies. So, systematic review approach was used in the study. The systematic research was conducted in Web of Science and Scopus databases, covering studies between 2019 and 2024. The systematic review procedure of the study is guided by the PRISMA flow diagram. The analysis examined data from 17 papers that satisfied the specified criteria for inclusion in this study. Within the parameters of the initial research inquiry, we identified patterns in study of lesson study and competences related to entrepreneurship. It can be asserted that lesson study, which converts teachers' practical knowledge into professional knowledge during their professional service processes, enhances their professional skills, and empowers them to teach in alignment with future demands, can also contribute to the long-term development of entrepreneurial competencies in teachers' professional lives, as its cyclical process evolves into professional learning.

## 1. INTRODUCTION

In order to effectively adapt to the changes of the 21st century, implement necessary adjustments, and achieve success, it is imperative to possess specific abilities. The objective of the education system to cultivate persons with integrated competences implies that education is the most efficient method of obtaining these competencies and converting them into patterns of behavior. Given this rationale, it is crucial for each nation to evaluate its educational institutions in accordance with progress and transformation. Each country has developed national qualification frameworks with distinct structures and contents, which will greatly enhance the development and operation of their education systems.

Core competencies, the overarching and shared objectives of all educational programmes within the European Union, pertain to the fundamental abilities that every individual will develop during their formal education. The European Commission introduced core competences in EU countries, which encompass the fundamental knowledge, skills, and attitudes necessary to prepare students for personal, professional, and socioeconomic

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development, with the explicit objective of fostering social engagement and contribution. This framework utilizes "qualification type identifiers" to specify the qualification types that are included. Key competences are a critical component that qualification type identifiers should include. Entrepreneurship competence is identified as one of the foremost competencies (Ministry of National Education [MEB], 2018).

The cultivation of entrepreneurial skills has a significant impact on the economic strength of nations and is crucial for their integration into the global power structure. In our nation, it is imperative to nurture persons who possess the ability to convert obstacles into opportunities, promote unrestricted innovation, and harness their entrepreneurial potential. Hence, nations have endeavored to include entrepreneurship education into their educational curricula, ranging from primary education to higher education, with the aim of fostering an entrepreneurial mindset and, consequently, cultivating persons with entrepreneurial traits (Çiçek & Durna, 2012). The curriculum of our country includes entrepreneurship competencies, even if it is taught as a foreign language.

The Directorate General for European Union and Culture's commission report highlights the necessity of improving foreign language instruction to fully realize the cultural, social, and economic potential of the European Union (Aldemir & Er, 2012). The Turkey 2023 education vision has established specific goals for foreign language education, including offering online and in-person training to foreign language teachers in line with lifelong learning. Additionally, it aims to ensure that these teachers are native English speakers and implement foreign language education policies and teaching methods that promote qualified foreign language education. The establishment of a national foreign language education council aims to define certain criteria, classroom methodologies, and teacher proficiencies (MEB, 2019). The Ministry of National Education has undertaken research on optimizing long-term planning and increasing efficiency in professional development and foreign language instruction.

Banjica (2020) asserts that contemporary teaching necessitates teachers to update their professional credentials. The primary professional responsibility of teachers is to facilitate the acquisition of new habits and behaviors among learners. During the instructional process, every teacher aspires to exhibit competent and effective teaching. Essential components of teacher competences include their knowledge, abilities, and the desired outcomes. What the teacher knows is indicative of his expertise and pedagogical practices. The actions and behaviors of a teacher demonstrate their abilities, attitudes, and values. The objectives that the teacher aims to accomplish are indicative of their motivation and enthusiasm in teaching (Banjica, 2020). Teachers necessitate assistance from professional development models throughout their tenure to sustain their continuous learning and augment their 21st century competencies. Several professional development approaches, including the lesson study model, include comparable stages and are designed to facilitate lifelong education for teachers. In contrast to these paradigms, lesson study emphasizes the ongoing and adaptable growth of teachers' professional skills.

Lesson study is a cooperative professional development method where educators gather data to create a lesson plan, deliver a lesson, watch students, and restructure the lesson. Teachers are interested in implementing more efficient learning strategies that might enable students to get better and more meaningful learning results (Stepanek *et al.*, 2007). Lesson study is a form of classroom research that enables educators to examine the process of teaching and learning within the setting of a functioning classroom. It is the systematic procedure by which teachers document their work, including the design of the lesson, their explanation and experience of the lesson's functioning, and the knowledge and skills they acquire and impart during the lesson (Akiba & Wilkinson, 2016; Dudley, 2015; Lewis & Lee, 2017; Ono & Ferreira, 2010).

The notion of lesson study is commonly understood as the distributed responsibility, cooperative effort in the preparation of a lesson plan, implementation, observation of lessons,

monitoring and assessment of teaching, reflection on practice, and subsequent planning (İleritürk, 2021). Given these factors, lesson study is an autonomous and participatory activity. All participants collaborate and provide an equitable contribution to one another in all decision-making processes (Dudley, 2015; Lewis & Lee, 2017; Stepanek *et al.*, 2007). Educators consider the examination of students' intended learning and cognitive processes to be a crucial and stimulating aspect of class preparation. The lesson study groups explore the process by which students acquire knowledge and construct their own learning experiences. Furthermore, this review serves to reveal the areas of interest among pupils. Through observation during lesson study, teachers enhance their own comprehension and acquire insight into how to establish connections between various subjects and expand upon them. Nevertheless, teachers dedicate time to scrutinize and contemplate the curriculum and numerous instructional resources. Simultaneously, teachers convert their expertise in the subject into authentic and significant experiences for students (Stepanek *et al.*, 2007).

Classroom-based professional development utilizes lesson study, which offers a diverse array of characteristics. The key aspects among these qualities are the allocation of time for engagement with pertinent teachers, provision of administrative support, and development of an action plan. The lesson study is structured into a four-stage cycle. The first stage of the cycle involves creating the program and establishing its objectives. In this phase, educators contemplate the long-term objectives for students' acquisition of knowledge and growth, engage in the creation of programs and standards, and ascertain subjects that will captivate kids.

The planning stage is designated as the second phase. The planning phase entails the meticulous selection or reorganisation of the research route. An effective plan must incorporate the subsequent elements:

- Overarching objectives
- Anticipated students' feedbacks
- Data acquisition strategy
- One conceptual framework of the learning cycle
- Rationale for the employed methodology

The third phase of the lesson study is commonly referred to as the research course. A single individual among the group of teachers conducts the research lesson, while the remaining members of the group observe and gather data. The concluding phase of the cycle of lesson study is reflection. The observers convene a formal instructional session during the phase of reflection. During this meeting, observers exchange the knowledge acquired from the class. The collected data is used to enhance student learning, subject material, course and unit design, and improve learning and teaching practices. During the reflection phase, students document all components of the lesson study cycle and generate fresh inquiries for future learning (Lewis & Hurd, 2011; Lewis & Lee, 2017).

Upon reviewing the literature, it was seen that the capabilities of educators in professional development and the success and skills of students improved after completing the lesson study process (İleritürk, 2021; Kanellopoulou & Darra, 2019; Uştuk & Çomoğlu, 2019; Willems & Bossche, 2019). The contributions of lesson study include fostering collaboration, promoting empathy among students and teachers, enhancing the creative and critical thinking abilities of teachers and students, enabling teachers to develop innovative and researcher identities, and fostering courage in both students and teachers (Akalin & Kılıç, 2022). It may be argued that the obtained competences include entrepreneurial skills. Lesson Study entails collaborative efforts among educators to design, execute, observe, and assess a lesson. Collaborative work fosters the enhancement of entrepreneurial competencies, including innovation, problem-solving, risk-taking, and leadership. In this process, educators collaboratively explore how to successfully communicate entrepreneurship concepts. Entrepreneurship necessitates practical abilities over theoretical understanding. Lesson study facilitates the observation of instructional

practices in an authentic classroom setting, enabling the direct evaluation and enhancement of teaching approaches that foster entrepreneurial abilities through feedback. The lesson study cycle entails utilizing each observation and assessment to improve the following portion of the lesson. Ongoing practice and the cultivation of feedback are essential elements of entrepreneurial education. This parallelism illustrates that lesson study serves as an exemplary example for cultivating entrepreneurial skills. Therefore, the researchers think that lesson study is a more suitable Professional development model for entrepreneurship skills because of its nature being collaborative, cyclical and practice-based approach.

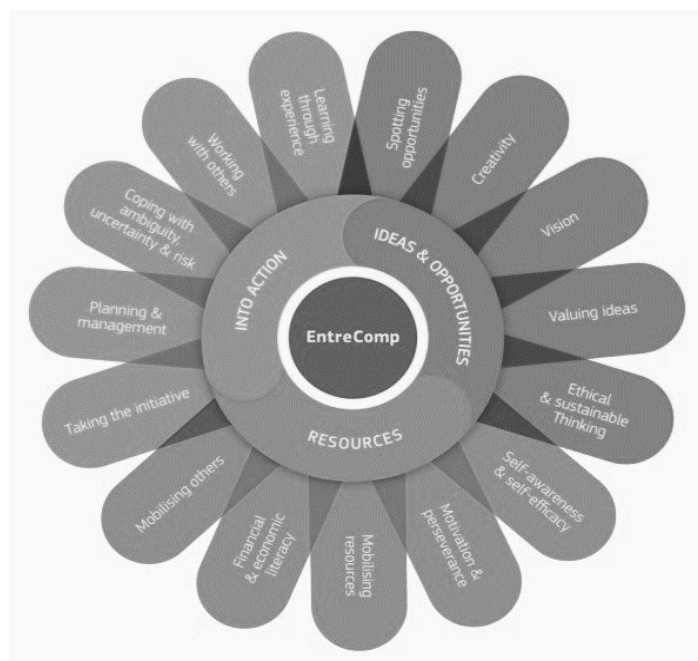
An entrepreneur is an individual who establishes a new business despite risk and uncertainty with the aim of maximising profit and growth by recognising significant opportunities and assembling the required resources to capitalise on them (Swanson, 2017; Zimmerer & Scarborough, 2008). An entrepreneur is an individual who possesses the ingenuity to combine resources in a unique manner and is prepared to assume risk and/or uncertainty associated with the undertaken action (Hisrich *et al.*, 2012). Entrepreneurship may be succinctly defined as the utilisation of available resources to actively seek for and exploit possibilities without any restrictions (Brooks, 2009; Swanson, 2017). A well acknowledged definition of entrepreneurship is the act of identifying and capitalizing on opportunities (Verma & Chaurasia, 2020). An analysis of entrepreneurial opportunity sources refers to the systematic identification, assessment, and exploitation of opportunities, together with the individuals who identify, assess, and profit from them (Shane & Venkataraman, 2000). Entrepreneurship can be defined as the systematic identification of resources, generation of ideas, and implementation of creative solutions, thereby converting opportunities into distinctive and valuable commodities (Özbey, 2022).

Advocates of the pedagogy approach contend that all instructional disciplines should include entrepreneurship as a pedagogical approach, prioritizing individual growth rather than entrepreneurship as a career, rather than teaching it as an independent topic (Moberg, 2014). The English language curriculum incorporates entrepreneurship within its curriculum, rather than teaching it as an independent module.

*Entrepreneurship encompasses the capacity to transform concepts into tangible outcomes by means of ingenuity, originality, and willingness to take risks, together with the competencies to strategize and oversee initiatives. Entrepreneurial competence refers to the capacity to effectively seize chances and ideas and convert them into valuable outcomes for others. Entrepreneurial competency requires awareness of the various contexts and possibilities for transforming ideas into action in personal, social, and professional spheres, as well as comprehension of the processes by which these chances emerge. Individuals must possess knowledge and comprehension of the methodologies required to strategize and oversee projects that encompass both systematic procedures and limited resources. Proficient communication and negotiation skills, together with the capacity to handle uncertainty, ambiguity, and risk, are crucial for making well-informed decisions. Entrepreneurial mentality is defined by qualities such as initiative, agency, invention, future-oriented perspective, bravery, and persistence in attaining objectives. It encompasses the aspiration to inspire others throughout the process, prioritizing ideas, empathy, concern for individuals and the environment, and assuming accountability through ethical methods (Turkish Qualification Framework [TYÇ], 2015).*

Figure 1 illustrates 15 competences that reflect the essential knowledge, abilities, and attitudes related to entrepreneurship. As stated by the European Commission in 2016, the competencies include identifying opportunities, creativity, vision, valuing ideas, ethical and sustainable thinking, self-awareness and self-efficacy, motivation and perseverance, mobilizing resources, financial and economic literacy, mobilizing others, taking initiative, planning and managing, skepticism and risk, teamwork, and learning through experience.



**Figure 1.** *EntreComp Cycle: 3 competencies field and 15 competences (McCallum et al., 2018).*

The assessment of these dimensions indicates a robust association between entrepreneurial aspects and the professional competences aimed at in the lesson study. The identification of opportunities, which is one of the entrepreneurship competencies and constitutes the starting point of the process, is defined as "identifying and capturing opportunities to create value by exploring the social, cultural, and economic image and identifying needs and challenges" (European Commission, 2016). Essentially, the process begins with the identification and definition of opportunities, followed by their utilization. Creativity is another competency in entrepreneurship. Creativity is the ability to generate and create valuable ideas by combining and matching different information, perspectives, and know-how (Zhang & Zhang, 2018). It begins with recognizing a problem or foreseeing an opportunity. Understanding the situation and considering the issues then leads to the design of new connections and the revelation of possible new component combinations (Akanbi & Aun, 2015). Entrepreneurial behavior is defined as creative thinking (invention) (Verma & Chaurasia, 2020).

Ames and Runco (2005) discovered a connection between diverse thinkers and successful entrepreneurs and identified evidence showing that successful entrepreneurs tend to generate more ideas and can produce valuable, useful products and services thanks to creativity. Teamwork can be defined as working with others through cooperation and communication to achieve a common goal. Members must understand their role in the team, be able to work on tasks independently of others, be flexible, and strive for the same goal in order to work effectively as a team. According to Vygotsky (1978), learning is a social process. According to Warhuus (2016), learners not only learn based on their developmental stages but also from the context they are in; they learn in groups and collectively create ideas. Another competency associated with lesson study is the ability to learn from experience. It involves using any initiative as a learning opportunity to create value, learning with others, including peers and mentors, and reflecting on success and failure (McCallum *et al.*, 2018). One of the entrepreneurial competencies is self-awareness and self-efficacy. According to Rizal (2014), self-knowledge is self-understanding, self-introspection, and self-discovery. According to Günhan and Başer (2007), self-efficacy is the individual's self-confidence. The European Commission's entrepreneurship qualification framework says that self-sufficiency and self-awareness mean "thinking about needs and wants in the short, medium, and long term, figuring out and judging strengths and weaknesses of oneself and others, and believing in the power to change the course of events despite uncertainty, disruptions, and temporary failures"

(EntreComp, 2016). Skepticism and risk-taking are characteristics of entrepreneurial people. Individuals who are entrepreneurs take more risks than those who are not entrepreneurs. People with a high tendency to take risks are more willing to make decisions in uncertain situations (Raab *et al.*, 2005). Smejkal and Raise (2006) define risk as "probability, the possibility of loss or failure, the variability of possible outcomes or their success, the difference between expected and actual outcomes, the probability of an outcome different from the expected, and the situation in which the quantitative magnitude of the event is subject to a certain probability distribution." Risk can be defined as "the danger of negative change in the target, the possibility of loss or profit" (Kozubikava *et al.*, 2017). Another entrepreneurial competency is mobilizing resources, among other things. Mobilizing resources is defined as "getting and managing the material, non-material, and digital resources needed to turn ideas into action," while mobilizing others is defined as "getting the support needed to achieve valuable results" (European Commission, 2016). Perseverance is a very pertinent entrepreneurial skill that might be applied to the lesson study. In the context of adversity, perseverance can be defined as the capacity of an individual to endure with effort (Hodge *et al.*, 2018). The entrepreneurial competency of valuing ideas involves the process of assessing the social, cultural, and economic worth of an idea, acknowledging its potential for value creation, and identifying suitable strategies to maximize its potential (McCallum *et al.*, 2018).

Given the significance of fostering entrepreneurial skills through lesson study, it is widely accepted that the systematic review approach should be used to provide the results of existing research in the literature. However, although there are many studies on the professional development of foreign language teachers (Coşkun, 2017; Goh & Fang, 2017; Gözel, 2017; Heppt *et al.*, 2022; Karataş *et al.*, 2017; Liu, 2021; Saykal & Uluçınar-Sağır, 2022; Xiao *et al.*, 2020; Zhiyong *et al.*, 2020), there are very few studies on the relationship between entrepreneurship and lesson study in the 21st century competency fields (Capella-Paris *et al.*, 2023; Rahmatullah *et al.*, 2022; Widiastuti *et al.*, 2023). The objective of this study is to analyze literature research on the lesson study model of English teachers and their entrepreneurship competencies. In line with this purpose, answers to the following questions were sought.

- What are the tendencies about the effect of foreign language teachers' lesson study models on their entrepreneurial skills?
- What are the results about advantages and disadvantages of effect of lesson study on entrepreneurship competences?
- What are the results about foreign language teachers' lesson study practices and entrepreneurship competencies?

## 2. METHOD

This study employed a systematic review methodology to assess the current literature. A systematic review entails a methodical and thorough approach to identifying, selecting, and analyzing studies to address specific research inquiries or resolve certain issues (Karçam, 2013). A systematic review, in contrast to a conventional literature review, adheres to a stringent process to guarantee transparency and reduce prejudice. The review method encompasses well delineated inclusion and exclusion criteria, quality evaluation, and synthesis of results.

### 2.1. Search Strategy

The systematic review was performed utilizing two primary databases: Web of Science and Scopus. These databases were chosen for their extensive coverage, superior quality standards, and interdisciplinary characteristics, rendering them suitable for systematic reviews (Mulrow, 1994). The literature review was confined to papers published from 2019 to 2024 to emphasize current research, specifically investigating the effects of phenomena such as pandemics and digital transitions. Search terms; "lesson study", "lesson study and English", "lesson study and

foreign language teaching”, “lesson study and English teachers”, “entrepreneurship competencies”, “entrepreneurship competencies and English”, “entrepreneurship competencies and foreign language teaching”, “Entrepreneurship competencies and English teachers”, “lesson study and entrepreneurship”, “lesson study and entrepreneurship competencies” were selected.

## 2.2. Study Selection

The review incorporated studies according to the specified inclusion criteria:

- Released from 2019 until 2024.
- Concentrate on lesson study, entrepreneurial competencies, or both, within the realm of foreign language instruction.
- Research assessing the efficacy of lesson study in improving entrepreneurship competencies among foreign language educators.
- Articles subjected to peer review and published in English.

Studies were excluded if they:

- Failed to cover the fundamental principles of lesson study or entrepreneurial competencies.
- We are not concentrating on foreign language teaching.
- Do not constitute original research (e.g., review articles, opinion pieces).
- Were not subjected to peer review.

The criteria were established to guarantee the inclusion of only the most pertinent, high-caliber papers in the review, hence enhancing the validity and application of the results. The systematic review procedure of the study is guided by the PRISMA flow diagram shown in [Figure 2](#).

## 2.3. Data Extraction and Coding

Two independent researchers conducted data extraction by methodically coding the experiments according to preset criteria. The categories encompassed the year of publication, study methods, and educational setting (sample type and educational background). Inter-coder reliability was evaluated by the Cohen's kappa coefficient, resulting in a value of 0.85, signifying a substantial level of agreement among the coders. All differences were addressed through dialogue.

## 2.4. Risk of Bias Assessment

A risk of bias assessment was performed on each included study to ensure methodological rigor, utilizing the Cochrane Risk of Bias Tool (Higgins *et al.*, 2011). This instrument evaluates possible biases across the specified domains:

- Selection bias arises from inadequate random sequence generation and insufficient allocation concealment.
- Performance bias refers to the lack of blinding of participants and personnel in a study.
- Detection bias refers to the influence of outcome assessors' knowledge on the assessment of results, which can be mitigated through blinding.
- Attrition bias refers to the systematic differences in outcomes between participants who complete a study and those who drop out, leading to incomplete outcome data.
- Reporting bias refers to the selective reporting of outcomes in research studies.

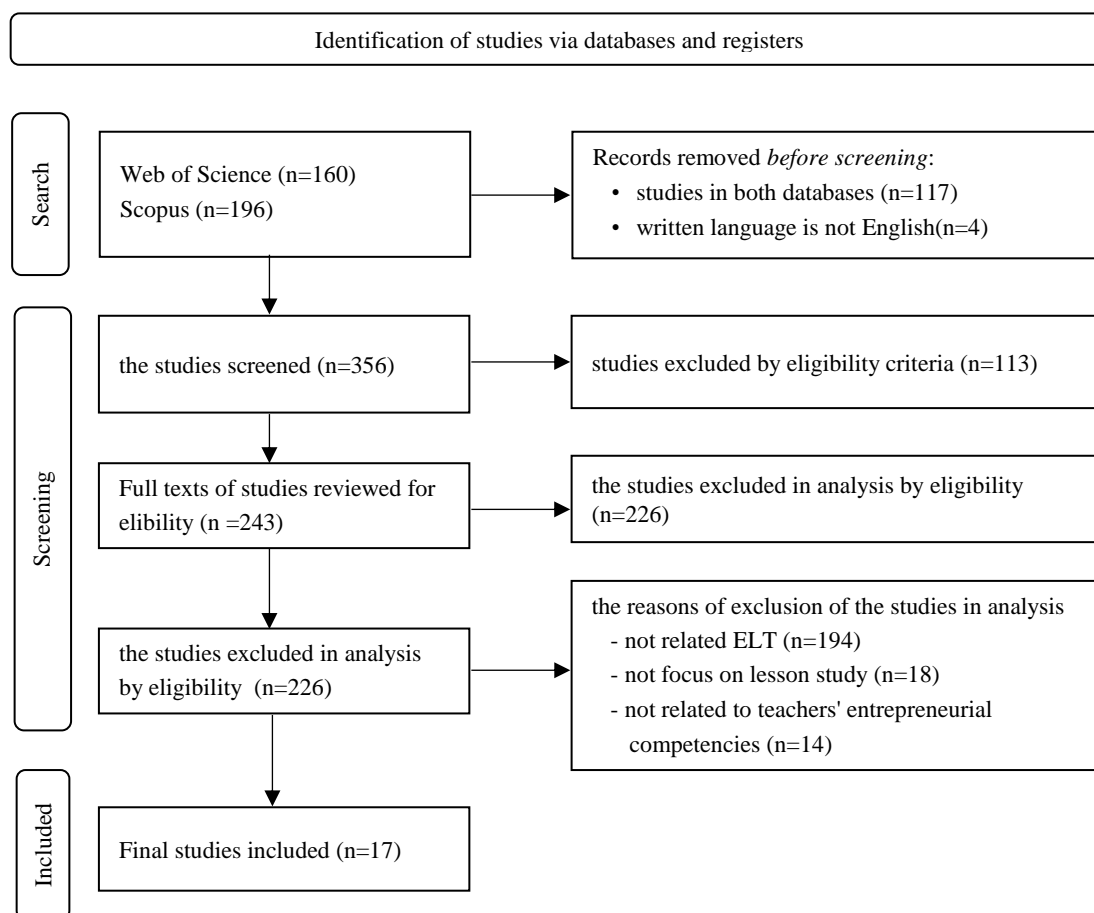
We assessed each study for the existence of these biases, classifying the risk of bias as low, high, or uncertain for each category. We subsequently assessed the overall risk of bias by aggregating these individual evaluations. We classified research exhibiting evident methodological deficiencies or numerous high-risk domains as high risk, whereas those conforming to rigorous procedures across all domains were deemed low risk. In the synthesis of results, we evaluated the overall quality of the evidence. This evaluation took into account the risk of bias as well as the precision, consistency, and directness of the study results. The synthesis assigned diminished importance to research exhibiting a significant risk of bias or

inconsistent results. Following the risk of bias evaluation, the researchers developed a summary table that delineates the methodological quality of each study incorporated in the review. Consequently, it is thought to enhance transparency and facilitate comprehension of the evidence's credibility.

## 2.5. Data Analysis

Content analysis was used to synthesize and analyze the data from the selected studies. The data were classified based on the impact of lesson study on improving the entrepreneurial competencies of foreign language educators. The analysis utilized the PRISMA flow diagram shown in Figure 2, offering a clear visual representation of the study selection process.

**Figure 2.** Data analysis process according to PRISMA.



## 3. RESULTS

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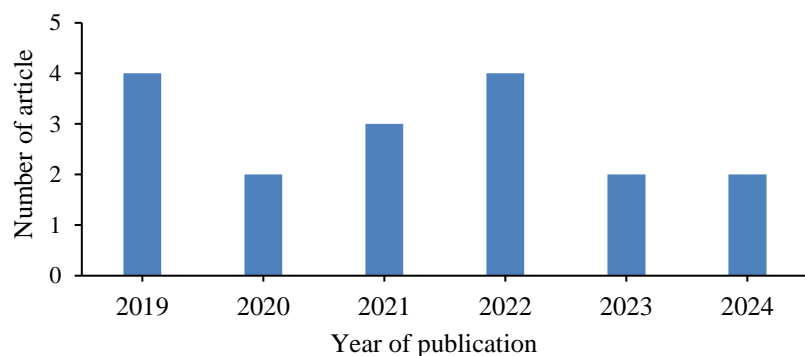
### 3.1. The Results About the Tendencies of Lesson Study and Entrepreneurship Competences

The research inquiry was about "What are the tendencies about the effect of foreign language teachers' lesson study models on their entrepreneurial skills?". The categories created in this context yielded the following findings:

#### 3.1.1. Distribution of published years

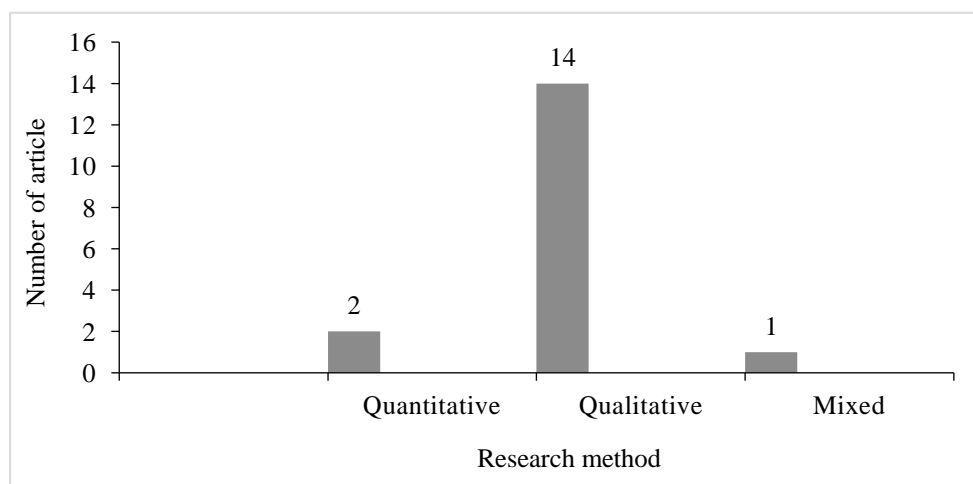
The study examined the articles used in data analysis based on their publication year. Figure 4 displays the findings derived from this approach. Figure 3 displays the findings of the published articles for the years 2019 (n = 4), 2020 (n = 2), 2021 (n = 3), 2022 (n = 4), 2023 (n = 2), and 2024 (n = 2).



**Figure 3.** Distribution of published years of the research.

### 3.1.2. Methods used in research

The study examined the articles included in the data analysis in accordance with the methods employed. Figure 4 illustrates the results obtained in this direction. Figure 4 reveals that the articles predominantly prefer the qualitative method ( $n = 14$ ). Two studies ( $n = 2$ ) used the quantitative method, while only one study ( $n = 1$ ) used the mixed method.

**Figure 4.** The methods used in research.

### 3.1.3. Sample groups

Analysis of the examined studies reveals that English teachers make up the majority of the sample groups. The sample groups of included studies was incorporate with other sample groups. Therefore, they were shown in Figure 5.

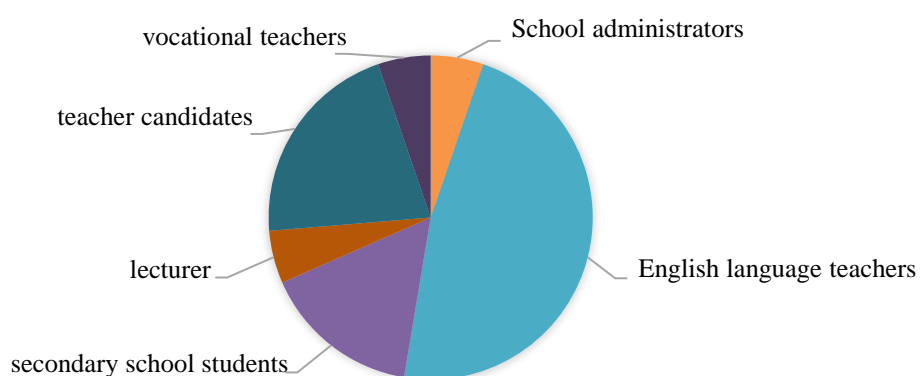
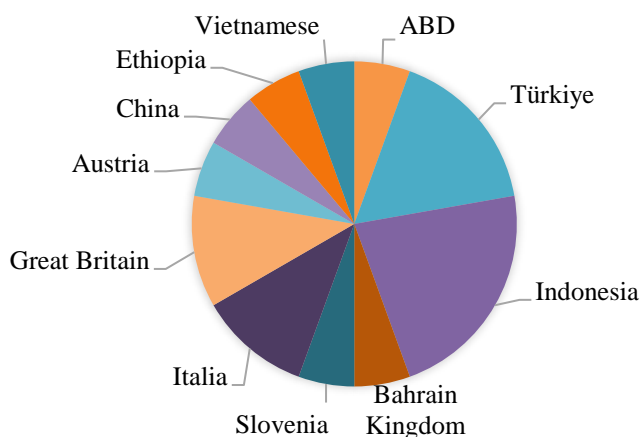
**Figure 5.** Sample groups of research.

Figure 5 shows the sample groups used in the research. Other sample groups used in the research are "secondary school students, teacher candidates, school administrators, lecturers, and vocational teachers," respectively.

### 3.1.4. Countries where the research took place

When the countries where the studies were conducted in line with the examined studies were analyzed, it was found that the majority of these studies were conducted in "Indonesia, the Great Britain, Turkey, and Italy." In addition to this, countries such as the Kingdom of Bahrain, Slovenia, USA, China, Ethiopia, and Vietnamese also host studies. Figure 6 illustrates the distribution of countries where research has taken place.

Figure 6. The countries where the research are held.



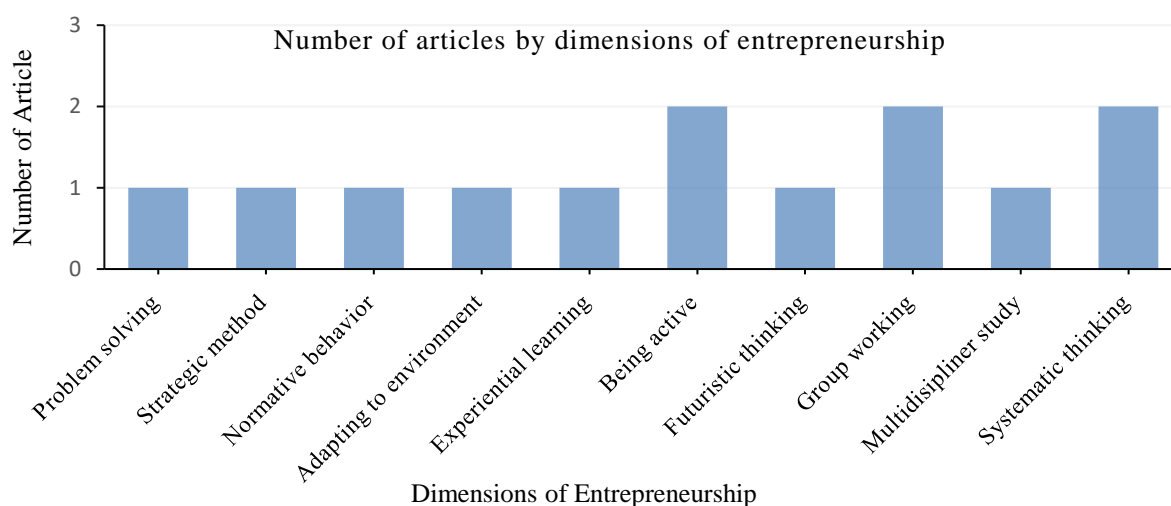
## 3.2. The Results About Effects of Lesson Study on Entrepreneurship Competences

The research question is, "What are the key findings that emerged from the lesson study and the literature on entrepreneurship competencies?" We've been looking for an answer to this question. The categories created in this context yielded the following findings:

### 3.2.1. Dimensions of entrepreneurship

Only three of the 17 studies included in the study focus directly on entrepreneurship. Examining the entrepreneurship dimensions of the three studies reveals the emergence of "systematic thinking (n = 1), forward-looking thinking (n = 1), normative behavior (n = 1), bringing together differences and interdisciplinary diversity (n = 1), harmony with the environment (n = 1), taking action (n = 2), strategic management (n = 1), group work (n = 1), experiential learning (n = 1), and problem solving (n = 2)". Figure 7 displays the findings regarding the dimensions.

Figure 7. Dimensions of entrepreneurship.



### 3.2.2. The advantages of effectiveness of lesson study and entrepreneurial competencies

The advantages and disadvantages of the lesson study and entrepreneurship competencies were examined. Accordingly, lesson study effect on entrepreneurship competencies development was investigated in terms of advantages. Table 1 displays the resulting findings. In this regard, it is seen that the advantages of providing an honest, productive and constructive discussion environment (n=7), group work related to lesson study (n = 5), gaining a deeper perspective on teaching and learning processes (n = 3), and being able to take part in non-judgmental group work (n = 2) are stated.

**Table 1.** Advantages of lesson study practice and entrepreneurship competences.

Advantages	f	Sample articles
Being active in non-judgmental group	2	Fox & Poultney, 2019
Learning from experienced teachers	1	Klammer & Hanfstingl, 2019
Learning by group reflections	1	Lee & Madden, 2019
Learning achievement	1	Lee & Madden, 2019
Planning lesson with different approaches	1	Lee & Madden, 2019
Sharing responsibility	1	Lee & Madden, 2019
Innovative learning approach and methods	1	Klammer & Hanfstingl, 2019
Self-determination highly	1	Klammer & Hanfstingl, 2019
Professional communication	1	Klammer & Hanfstingl, 2019
Gaining a deeper perspective on teaching and learning processes	3	Nguyen, <i>et al.</i> , 2024
Effective evaluation opportunity	1	Uştuk & Çomoğlu, 2019
Group work	5	Morselli, 2024
Supporting problem solving skills	2	Alwadi & Wilson, 2020
Deepening teachers' knowledge in accordance with different levels	2	Darsih, Suherdi & Safrina, 2021
Providing an honest, productive and constructive discussion environment	7	Achmad & Miolo, 2021

### 3.2.3. The disadvantages of effectiveness of lesson study and entrepreneurial competencies

Table 2 lists the disadvantages that have been identified in studies examining the effectiveness of lesson study and entrepreneurship competencies. Accordingly, the lesson study effect on entrepreneurship competencies development was investigated in terms of disadvantages. The research revealed that the inexperience of administrators and groups in observation and time management hindered their ability to implement standard-based programs, receive evaluations from others, and reflect on practices and teachers, particularly during reflection studies.

**Table 2.** Disadvantages of lesson study practice and entrepreneurship competences.

Disadvantages	f	Sample articles
Practicing standard-based curriculum	2	Lee & Madden, 2019
Difficulty in assessment	1	Uştuk & Çomoğlu, 2019
Lacking of reflective practices and teachers' views on reflection	1	Nguyen <i>et al.</i> , 2024
Inexperiencing of observations of administrators and peers	1	Lee & Madden, 2019
Difficulty in time-management	1	Nguyen <i>et al.</i> , 2024

## 3.3. The Results About Lesson Study and Entrepreneurship Competencies

The research asks, "What are the main findings emerging in the literature regarding lesson study and entrepreneurial competencies of foreign language teachers?". We examined the effectiveness of foreign language teachers' lesson study and entrepreneurial competencies in 17

articles. In this regard, one article stated that lesson study and entrepreneurship competencies were ineffective for foreign language teachers, despite some articles showing no difference in effect ( $n = 3$ ). 13 of the studies examined stated that lesson study was effective on entrepreneurship competencies. Table 3 presents these findings.

**Table 3.** *The results about lesson study and entrepreneurship.*

Results	<i>f</i>	Articles
Lesson study is effective.	13	Susanto <i>et al.</i> , 2020; Alwadi & Wilson, 2020; Bayram & Bıkmaz, 2021; Achmad & Miolo, 2021; Zhang & Luo, 2022; Mulualem <i>et al.</i> , 2023; Mahmud <i>et al.</i> , 2023; Nguyen <i>et al.</i> , 2024; Fox & Poultney, 2019; Uştuk & Çomoğlu, 2019; Morselli & Gorenc, 2022; Joensuu-Solo, Viljama & Varamaki, 2022; Klammer & Hanfstingl, 2019
Lesson study is not effective.	1	Wijnands <i>et al.</i> , 2022;
There is no significance.	3	Darsih <i>et al.</i> , 2021; Morselli, 2024; Lee & Madden, 2019

#### 4. DISCUSSION and CONCLUSION

The objective of this study was to systematically analyse the impact of lesson study on the entrepreneurial skills of foreign language teachers using a systematic review approach. The analysis examined data from 17 papers that satisfied the specified criteria for inclusion in this study. Within the parameters of the initial research inquiry, we identified elements in study of lesson study and competences related to entrepreneurship. Based on the acquired results, it was analysed the distribution of research by year over the past five years. Considering the five-year period, it is seen that researchers conducted more research in 2019, 2020 and 2022. Concurrently, a thorough analysis of the research indicated that most of them ( $n = 13$ ) used qualitative methodologies. The primary rationale for conducting studies using qualitative methods is that the nature of lesson study and entrepreneurship competencies is better aligned with the data collecting and analysis techniques employed in qualitative research. An analysis of the sample groups comprised in the studies indicates that they are predominantly consisting of English teachers. With the objective of investigating the entrepreneurial skills of foreign language teachers, this is a predictable result. The analysis of the nations where the research were conducted indicates a notable clustering in Indonesia, Türkiye, Italy, and the United Kingdom.

The study's findings indicate that three studies are directly relevant to the aspects of entrepreneurial abilities. The research mainly concentrates on two key entrepreneurship skills: proactive action and effective problem-solving. The elements of taking action and issue solving, especially in the context of lesson study, are thought to contribute to the cultivation of problem-solving abilities for possible challenges that may emerge in action and research courses. Zhang and Zhang (2018) argue that the variables of entrepreneurship, namely innovation, teamwork, self-awareness, and self-efficacy, are highly associated with the processes of lesson study. Furthermore, it is widely accepted that designing research lessons that are in line with collaborative work in terms of entrepreneurship competencies and the lesson study process, while also fostering creativity and teamwork among the learner group and enhancing learning skills, allows teachers to improve their problem-solving abilities. The academic research actively integrates the competency of "taking action". Lesson study, developed based on the lesson study paradigm, enable English teachers to strategically plan their own and their students' competences, as well as creatively construct their lessons by taking into account a diverse range of information and skills. In this manner, it can be confidently stated that the operational process of the lesson study model greatly improves entrepreneurship competency. Engaging in collaborative work, especially during the phases of lesson plan development, revision, and execution, allows teachers to impartially examine themselves and promotes their personal and

professional development. Furthermore, in accordance with the analyzed studies, it was reported that they encountered drawbacks in the execution of lesson study and entrepreneurship skills, particularly during observations, owing to the groups' limited experience. They also faced challenges in time management for conducting research courses and observations, as well as in assessment.

An additional research inquiry to be addressed in the study is to ascertain the efficacy of lesson study in relation to the entrepreneurial skills of foreign language teachers. The majority of the studies ( $n = 13$ ) demonstrated the efficacy of lesson study in this context. Hence, the implementation of lesson study, which is a professional development paradigm, can facilitate the enhancement of teachers' entrepreneurial skills. Considering the last five years of literature indicates a lack of research that specifically investigate both lesson study and entrepreneurship skills. Nevertheless, the intended professional abilities at the conclusion of the lesson study process also include skills related to entrepreneurship. The process of entrepreneurship starts by first finding chances to provide novel value. We subsequently utilize the available resources and convert them into chances to generate profit. In the process of lesson study, educators initially analyze the accessible materials such as guides and lesson plans. They next convert current experiences into potential possibilities and proceed to design and create the research lesson. Thus, the lesson study asserts that the capacity to recognize possibilities and generate resources at the beginning of the planning process is a fundamental element of entrepreneurship.

Once the research course objectives have been established, group members proceed to design the research course by drawing upon their previous experiences, observations of their present students, and a range of available sources such as guides, reference books, and lesson plans. (Fornandez & Yoshida, 2004). Planning and management in entrepreneurship refer to the process of establishing priorities and action plans, as well as creating target objectives for the long, medium, and short term (European Commission, 2016). The above arguments elucidate that both entrepreneurship and lesson study entail a systematic planning process that commences with the establishment of objectives. Undoubtedly, the collaboration between teachers is the fundamental determinant of the success of the lesson study model (Bozkurt & Yetkin-Özdemir, 2018; Choski & Fernandez, 2004; Doig & Groves, 2011; Ermeling & Graff-Ermeling, 2014; Hj Suhaili & Khalid, 2011; Lewis & Perry, 2014; Stepanek *et al.*, 2007). The concept is structured around collaborative stages, encompassing the organization, planning, execution, and reflection of the program and objectives. In the context of entrepreneurship competencies, collaboration is characterized as the act of collectively and cooperatively working with people to generate ideas and transform them into tangible actions (European Commission, 2016).

In the realm of entrepreneurship, the ability to appraise ideas is a fundamental skill. Specifically, members of the group actively engage in listening to one another's views and assess the worth of each other's ideas by employing methods like brainstorming or empathy mapping to exchange ideas and experiences. Based on the lesson study conducted by Stepanek *et al.* (2007), it is essential for group members to have the capacity to critically and realistically evaluate their own teaching methods, work together as a cohesive unit, have trust in one another, and show respect for each other's opinions. By adopting this viewpoint, it can be inferred that the attitude of valuing the principles employed in the instruction showcases entrepreneurial competence. The learning objectives relate to the development of ethical and sustainable thinking. Entrepreneurial competency, linked to the assessment of ideas, encompasses the ethical conduct and sustainable mode of thinking. The acquisition of ethical behavior is arguably one of the key attitudes that teachers should develop during the process of studying lessons. In order to maintain a sound procedure, educators must prioritize ethical principles such as precision, integrity, accountability, and humility. Furthermore, while developing a distinctive product, they give paramount importance to the sustainability aspects that provide value and advantages to both students and teachers.



The entrepreneurial process culminates in the emergence of a distinctive product that possesses both economic and social value. An integral component of the lesson study process is fostering collaboration among teachers and cultivating the conviction that improved outcomes will ensue. Teachers will gain awareness of the professional growth they and their colleagues experience as a consequence of these practices (Grove, 2011; Lewis & Perry, 2014), and they will strategically create a value system that will be advantageous for the learners. Entrepreneurial creativity refers to the generation of novel and economically valuable concepts. As the objective of entrepreneurship is to locate and assess possibilities, generate ideas, and produce a distinctive product, creativity is a crucial component of the entrepreneurial process. According to Lewis (2002), reflection meetings, in which every teacher and teacher candidate provides information for lesson study, greatly improve the quality of the debate by enriching scholarly discourse. Thus, each research course generated in a lesson study functions as an independent library production center.

Politis (2005) emphasizes that the acquisition of knowledge in entrepreneurship is a process that involves practical experience, conscious reflection, critical thinking, and direct action. Conversely, lesson study provides teachers with the opportunity to participate in live research lessons that they create and execute independently. This method establishes a distinctive experiential learning setting for educators, which emphasizes the interests and desires of the group and incorporates their own teaching experiences (Murata, 2011).

The lesson execution phase of the lesson study involves the observation of a teacher by other teachers while they are implementing the planned lesson. This observation serves to assist the professional growth of teachers. The study conducted by Choski and Fernandez (2004) revealed that teachers displayed feelings of anxiety, enthusiasm, shyness, and timidity while being observed during their lessons. This can be associated with the self-assurance or self-efficacy of instructional professionals. Serbest's (2014) study demonstrated that teachers' outcomes from the implementation of lesson study interventions resulted in a rise in their self-assurance and self-efficacy convictions. Furthermore, self-efficacy is a crucial entrepreneurial skill.

Students that engage in lesson study are expected to develop skills such as skepticism and risk-taking, which are considered essential entrepreneurial competencies. The European Commission (2016) defines scepticism and risk as the act of making judgments in situations where the outcome of the decision is unknown, the available knowledge is incomplete or uncertain, or there is a possibility of repercussions. Lesson study indicates that teachers are progressively embracing greater risks by implementing diverse approaches in classroom practices, a phenomenon that is thought to augment their expertise in the field and pedagogical knowledge (Cajkler *et al.*, 2014). Alongside risk-taking, the ability to take initiative is a crucial skill in entrepreneurship. The learning outcomes of taking initiative, a competency in entrepreneurship, encompass the ability to tackle problems by beginning procedures that generate value, taking strategic action to accomplish objectives, and diligently carrying out planned tasks (McCallum, 2018). The utilisation of this entrepreneurial competency is observed.

Consequently, lesson study, a structured professional development process that transforms teachers' practical knowledge into actionable insights, significantly contributes to their long-term professional growth. As education systems prioritize skills like creativity, critical thinking, and innovation to prepare students for future challenges, lesson study enables teachers to align their instructional practices with these emerging priorities. The cyclical nature of lesson study, encompassing stages of planning, implementation, observation, and reflection, parallels the iterative processes fundamental to entrepreneurial thinking. Through consistent participation in this cycle, educators develop behavior and mindset linked to entrepreneurial competencies, including problem-solving, adaptability, collaboration, and ongoing learning. Over time, these competencies become established as habitual professional learning patterns, promoting

resilience, creativity, and proactive decision-making. Lesson study contributes to teachers' immediate classroom effectiveness and supports the long-term development of entrepreneurial skills, enhancing their capacity to innovate, lead, and address future challenges in their professional lives. It functions as a transformative instrument that connects conventional teaching methods with the progressive requirements of modern educational systems. Potential future research might investigate the influence of instructional designs for foreign language teachers on their entrepreneurial skills in pre-service education via using alternative Professional development models e.g. micro-teaching or school-based Professional development models etc.

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The authors declare no conflict of interest. This research study complies with research publishing ethics. The scientific and legal responsibility for manuscripts published in IJATE belongs to the authors.

### Contribution of Authors

**Nalan Özbey:** Investigation, Resources, Visualization, Data Analysis, and Writing-original draft. **Duygu İleritürk:** Methodology, Data Analysis, Supervision, and Validation.

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