



Games Learning Method in Improving Entrepreneurial Skills in Entrepreneurship Learning

(A Literature Review Study)

Delvia Safitri^(✉) and Yulhendri

Faculty of Economic, Universitas Negeri Padang, Padang, Indonesia
delviasafitri30@gmail.com

Abstract. This paper aims to present a method for Systematic Literature Review (SLR). SLR is a method for examining the scientific literature that develops insights, critical reflection, future research paths, and research questions. SLRs are common in disciplines dominated by quantitative approaches, but they can be adapted in studies of generally accepted quantitative and qualitative approaches. Approach: literature review, as a written work used for academic purposes, must have a logical, clear, and planned structure. In addition, this SLR also requires research that has been carried out using qualitative, quantitative and mixed methods.

These findings provide evidence that from the management of research articles, research clusters were found that were developed, namely: Entrepreneurs Education, Small Business Development, Business Games simulations, Creativity and innovation, Start-Ups, Entrepreneurial support organizations. From the clusters that have been obtained, the researchers conclude that each cluster becomes a game learning solution in improving entrepreneurial skills. In addition, it is hoped that from the Vosviewer data that has been processed into a research agenda finding, the researchers suggest that the future research agenda is contextual agility. So that future researchers will discuss more deeply about how contextual agility in improving entrepreneurial skills.

Keywords: Structured literature review · Games learning method · entrepreneurial ability · entrepreneurship education

1 Introduction

The development of entrepreneurship is very influential for economic growth in every country. Entrepreneurship can also contribute to improving the standard of social life, by creating jobs, economic rewards and job satisfaction [1]. So that there are significant changes, including changes in the field of education. The main purpose of the education system is to equip students with basic skills that will lead them to knowledge and provide information directly to students. One of the targeted abilities to be obtained is entrepreneurial ability [2]. In a narrow sense, entrepreneurial ability is the ability to start

a business [3]. Entrepreneurial skills cover the entire process from basic ability to engage in all aspects of business activities to comprehensive management and entrepreneurial skills to self-employment skills [4]. Some of them mention that entrepreneurship is a factor that positively affects the growth and development of the national economy and the welfare of the community. It is also defined as a multifaceted phenomenon due to participation in job creation, introduction of innovation, support of competition and improvement of economic efficiency [5].

However, entrepreneurship education is still relatively immature and is rarely adequately addressed at the strategic level by universities or national policy [6]. This is especially true in technical colleges, which is very important, especially considering the potential for innovation that comes from studying and utilizing technology to improve skills [7]. This issue involves content and teaching methodologies and tools, because problem solving and multidisciplinary are important for the development of students' entrepreneurial attributes in scientific and technical fields. According to Dale's experience cone theory proposed by Edgar Dale explains that students can only remember 10% of what they read, but almost 90%, if they are involved in work, even if the simulation is in a job/game [8]. So a game-based learning method is needed so that students can apply it. One of the learning methods that will be discussed in this study is using the *games learning method*.

In improving entrepreneurial skills, a learning process is needed through the *Games learning method*. *Games Learning* is learning that is applied by adopting a game system to motivate students' abilities. *Games Learning* is a system that is applied in learning, where educators can adopt a game for cognitive needs and learning motivation so as to stimulate students' critical thinking skills [9]. *Games* are a fun activity, trying to find solutions and problems faced. *Games* have been used as a tool in facilitating effective learning [10]. With *Games Learning*, students will provide direct feedback (which is efficient for procedural learning) and assessment and enable personalized learning [11]. Furthermore, students place learning that has an active, stimulating role in increasing abilities in entrepreneurship [12].

Previous researchers have argued that *games* can improve teaching and learning that using games in the classroom can motivate students to help students with knowledge construction. *Games Learning* can make it easier to start a business idea until the idea develops [13]. In this context, the notion of game-based learning has been approached through the cognitive learning dimension [14]. A review of previous researchers explains that in the US in 1994 more than 200 business games were used by 1,700 colleges offering business programs [15]. The current state of the art shows the increasing use of such tools at US Universities in the progressive adoption of cutting-edge technologies (eg virtual reality, artificial intelligence) [15]. Some elements of the *Games Learning method* are challenges, rules, interactions, goals, results and feedback. The elements of challenges that exist in the game with all the provisions that must be obeyed, are able to train students in responding to problems to be able to solve them using the abilities they already have. As is *Games learning* is expected to be able to increase entrepreneurship.

This article will be used on PICEEBA 9 which aims to provide a forum for participants to disseminate their ideas and research results and develop their networks. With

the contribution to Piceeba 9, it is hoped that this conference can provide a deeper understanding of the issue of Economic Education in the games learning literature in universities. This year's PICEEBA theme is "Leap to the imminent future: Seizing Opportunities in Education, Economics, and Business". In this conference, we invite experts, practitioners and observers from around the world to sit together to explore various issues and debates about economics, economics, business and management education, accounting, and entrepreneurship.

The literature review of this article on *Games learning* aims to improve entrepreneurial skills. So that it is hoped that later it will be used in the world of education to foster creativity and innovation in improving entrepreneurial abilities. In addition, the goal is that students are able to start a new business (*start-up*) with various literature studies that will be carried out. Thus, the purpose of this article will be to discuss in more depth the *game learning method* in improving entrepreneurial skills. How is the platform used in entrepreneurship learning by using a platform that can build creative and innovative students. In practitioners of the global economy, entrepreneurship will have a major impact on the welfare of society, especially in Indonesia. With these learning games, they will be able to seize opportunities in the economy and business. It is hoped that this learning game will be useful to other parties and be a consideration in reading it.

Games learning literature regarding the effect on increasing entrepreneurial skills. So this article will discuss the synthesis of the previous literature on this topic. Therefore, we conducted a systematic literature review (SLR) of the existing literature on *games learning*. The SLR method is known to produce robust, reliable and replicable findings [16]. Our study contributes to the existing literature by systematically reviewing findings from 81 articles on *Games learning* in the journal ScienceDirect and searches on Google Scholar. We first identify and collect literature on *games learning* relevant to our topic of interest. So, the researchers raised the title of the *Games. Method Learning* to improve entrepreneurial skills a literature review study The systematic literature review (SLR) "aims to provide a complete, detailed and fair picture" [17]. The purpose of this study is to understand the concept of the *Games Learning method* to determine future research agendas, so that systematic literature review is a suitable methodology to create a fair synthesis of related evidence to improve entrepreneurial abilities.

1.1 Entrepreneurship

Entrepreneurship is defined as the process of creating value, building a new business from a profit-oriented business, or creating a new business or creating new goods or services [18]. According to [19] Entrepreneurship is a kind of behavioral feature, and this characteristic may not be present in every individual. Entrepreneurship has been defined as a term by many theorists [20]. Defining entrepreneurship education as a targeted intervention carried out by an educator in the lives of students through entrepreneurial qualities and teaching skills, which will enable students to survive the dynamics of the business world [21].

In other words, entrepreneurship is the creation of new and unknown information, including opportunities to see existing opportunities or create opportunities [18]. The concept of entrepreneurship as "a process in which several opportunities are sought

to create value and different resources are brought together to benefit from these opportunities [22]”.

Entrepreneurship is a dynamic decision process. Based on the available information, knowledge, talent and experience, the entrepreneur decides to explore the previously identified opportunities. All creative processes for corporate courage starting from the culture, leadership and mindset of entrepreneurs, applying their creativity and developing innovative ideas, trying to gain some competitive advantage from strategic creations in the medium or long term will lead to wealth creation [23]. Strategic planning enables entrepreneurs to explore possible future growth and business development scenarios, understanding when is the right time to build your resources (for example, trained personal deconstructing, ed customer portfolio development, etc.) that will enable the company to move towards healthy development. The growth of this company can also be analyzed externally, consider environmental trends and determine the value of what the company has to offer, according to the characteristics of current and potential market demand. The better the entrepreneur understands the structure and functioning of the systems (his company and environment) in which you operate, the greater your chances of success. Therefore, companies need to be in continuous learning, as a prerequisite for their healthy development [24].

1.2 Entrepreneurship Ability

Entrepreneurial ability is the key to the skills and tacit knowledge possessed by entrepreneurs. Entrepreneurial ability This is the intellectual capital owned by individuals. Abilities include high-level features, personality, skills, and knowledge [25]. Entrepreneurial ability is the ability to organize various sources or factors of production effectively and efficiently so that the business is successful and develops and can provide goods and services for the community [26]. In addition, the entrepreneurial abilities possessed by an entrepreneur include technical abilities, abilities in business management, and personality abilities in entrepreneurship. The ability in entrepreneurship is a business, especially business leaders who are able to manage existing resources including managing their workers in achieving their business goals. This ability in entrepreneurship is the driving force to achieve business goals (achieving goals through others) which is the basis for the success or failure of the business [27].

Entrepreneurial ability refers to the ability to manage and manage a company in the process of starting a business. In addition, entrepreneurial ability includes innovation, ability to use knowledge and comprehensive ability [28]. The author believes that entrepreneurial ability is the acquisition of knowledge by students, and the combination of acquired knowledge, information and practical activities to create a product or service in the process of creating social value. In achieving the goals of an organization requires a skill or art (art). A manager in carrying out the management function should utilize the management elements he has [29]. Furthermore, in forming competencies, it needs to be managed properly so that it is more efficient in business activities.

1.3 Games Learning

Games Learning is a system used in the educational process that allows users to use games to meet the cognitive interests and motivational needs of students' learning [35]. In this learning, students need to learn, but they need a fun approach. Games This is one model that is applied to train the brain's ability to overcome conflicts and problems contained in a game.

The problems and conflicts that arise in the Games are taken from real life and combined with imaginary aspects. Learning Games are used to resolve conflicts and problems in a more interesting way. Game -based learning model is a way to present learning material in the form of games. The potential of the game as a learning model can be used as a model of student motivation. This is because the game has the ability to affect the cognitive and emotional aspects of students simultaneously [36]. This method is used to make resolving conflicts and problems more interesting and varied.

Game -based learning model is a way to present learning material in the form of games. The potential of the game as a learning model can be used as a model of student motivation. Games have the ability to influence the cognitive and emotional aspects of students simultaneously [37]. In games, students learn to consider and correlate cause and effect, focus and recognize problems in games, and find solutions to problems in games. How to present material through various forms of play activities and create a fun, serious but relaxed atmosphere for students to learn happily [38]. Therefore, it can be concluded that learning that utilizes games can provide an interesting, challenging, innovative learning environment and increase the creativity of students. [39] stated that these games have been referred to by various terminology, such as educational games, digital learning games, GBL, edutainment games, persuasive games, epistemic games, instructional games, and serious games.

2 Methods of Research

The current study conducted a systematic literature review study that focused on the relationship between game learning applications in improving entrepreneurial skills [40]. Literature review is a literature search, both international and national, which is carried out using the Google Scholar database [41]. The main reason for conducting this review is to explore the current impact of the Games application learning in improving entrepreneurial skills. Notably, despite decades of growing research on games learning in enhancing entrepreneurial skills attempts to translate existing findings into a systematic review [42]. Literature review is a literature search, both international and national, which is carried out using the Google Scholar and ScienceDirect databases [41].

This writing uses secondary data. The purpose of this SLR method according to [43] is to be able to identify, assess, interpret the findings of a research topic. In this paper, the author uses data from various previous research results sourced from journals relevant to the research theme. This writing uses descriptive analysis, the analysis of the data can be obtained by analyzing and analyzing in depth systematically, critically, so that it is described in a narrative so that it becomes easy to understand by stating an accurate and up-to-date information on the phenomenon that occurs. To get maximum results Research Questions (research questions) are arranged to focus more on a review

Table 1. Research Question

ID	Research Question	Games Learning
RQ 1	What research has developed in Games learning	Identify research that has developed in Games learning
RQ 2	What are the themes that develop with existing research	What are the themes that develop with existing research
RQ 3	What are the research gaps and research opportunities that can be done by further research.	What are the research gaps and research opportunities that can be done by further research.

Source: Data Processed 2022

Table 2. Inclusion Criteria In This Literature

Inclusion Criteria	The research was conducted in the field of education on entrepreneurship learning using the findings of previous research related to the topic of the problem. This study discusses and compares
Exclusion Criteria	Articles that are not open access and articles that only include abstracts.

Source: Data Processed 2022

of a literature study and can make it easier for researchers to find related data. Research Questions (RQ) in this study are (Table 1).

The articles used in the literature review are articles used on Google Scholar and ScienceDirect using the keyword “[Games Learning](#)”. The articles taken from these sites are open access articles that are relevant in this study. The articles were then sorted according to the research topic so that the relevant articles collected were as many as 81 articles. The article is considered to be representative of the entire research article on “Game Learning Methods in improving entrepreneurial skills”. The article was taken within the last 10 years. In the selection of articles used in literature writing, inclusion and inclusion criteria are needed to select the main research. The results of the search for data with these criteria will be used by the author to review articles. The inclusion criteria in this literature are shown in Table 2.

After determining the inclusion and exclusion criteria, the selection of articles to be reviewed is followed by a chart of the article selection process (Fig. 1).

3 Research Results

3.1 Research Profile

Research profile regarding descriptive statistics in the research that has been done. The profiles taken in the research that has been carried out are as follows: from the articles that have been reviewed, there is a profile of research that has been traced based on geographical conditions as shown in Fig. 2. Furthermore, it is traced based on the year published by taking the years 2012–2022 in Figs. 2 and 3. Then the research profile is

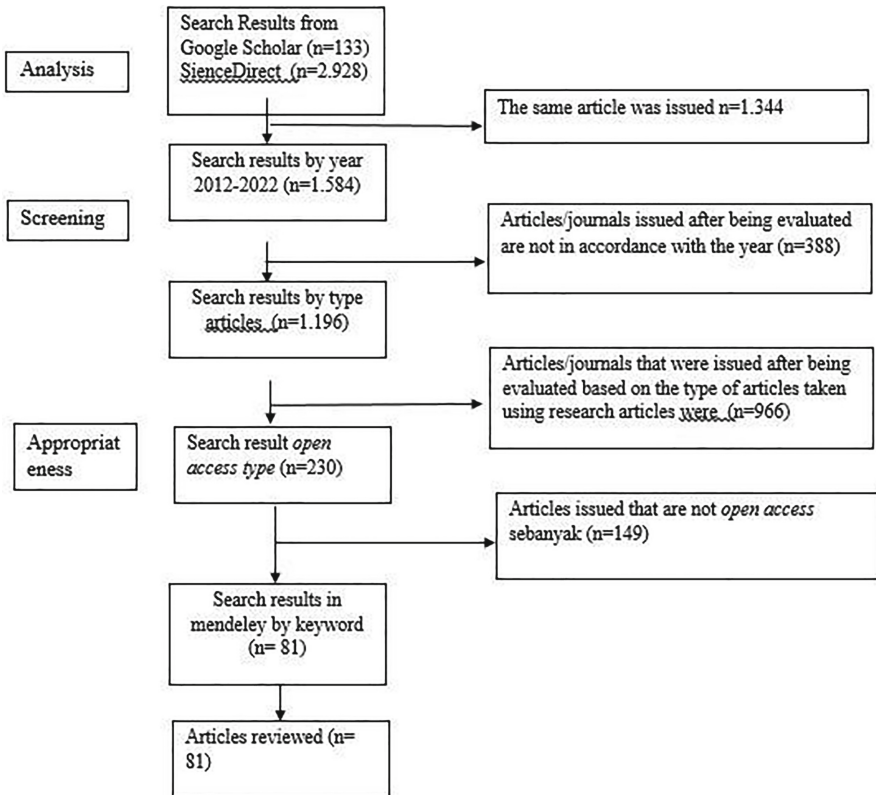


Fig. 1. Selection process

traced based on the publication source shown in Fig. 4. Furthermore, the profile to be taken is seen from the research methodology used. It is in Fig. 5.

In the first step, we read and analyze studies from several published research results, there are 81 articles to understand learning game learning applications in improving entrepreneurial skills. Research on games learning and entrepreneurship began in 2012 to 2022. With the largest number of studies published in 2021. This upgrade reflects the increasing role of the Games learning app in enhancing capabilities. A traced review of published sources revealed that most of the studies appeared in the journal *Procedia Computer Science* (Fig. 2).

Games learning research has used research methods consisting of 43 quantitative approaches, while research methods using a qualitative approach are 26 methods and a mixed method methodology is 12 methods. Quantitative methods in several studies explain that the analysis concerns quality [44]. Next on the mix methods feasible decision-making model that will be used by future entrepreneurs to determine which type of project category the entrepreneur can choose to host and project outcomes [45]. The qualitative research provides a collection of various data on respondents in higher education around the world part of the research literature that is traced. The research method in this model is a type of quasi-experimental design research in the evaluation

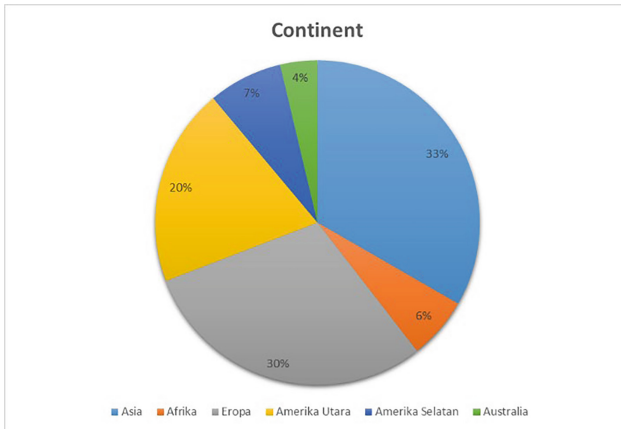


Fig. 2. Context by geography

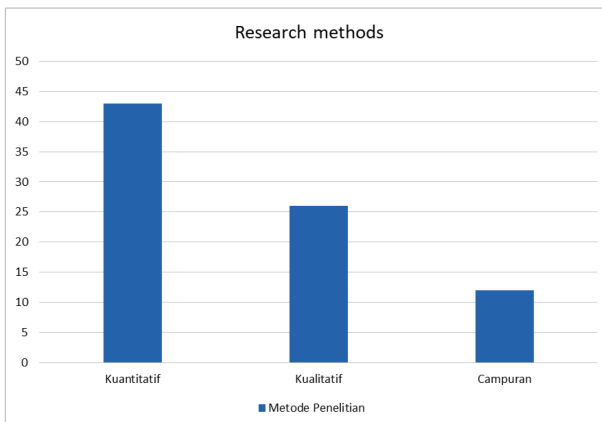


Fig. 3. Research Methods used by the research

instrument. The focus in this article is on methodologies and datasets to build a sound foundation for future publications on empirical results [46]. Further research using a case study by [47] explains that the Case Study outlines how these ideas were tested at Bournemouth, a south coast resort in England, in a study that was ultimately intended to be adopted nationally and with wider implications for global development of the visitor economy. Local changes ascribed to the study are assessed and their wider potential evaluated.

3.2 Thematic Results

Thematic analysis is a popular measurement method in the SLR methodology to see trends in the existing literature and understand the intellectual structure of the field [48]. As a component of a systematic review, thematic analysis allows for a unified review of

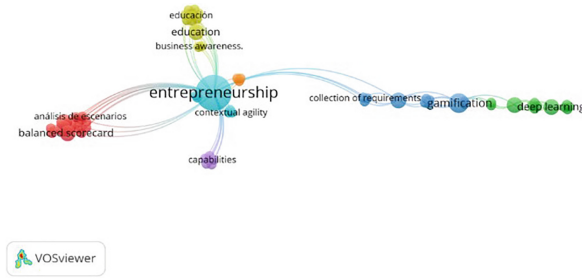


Fig. 4. Cluster Networking Visualization. Source: Processed articles

the main research topic. By using thematic analysis, researchers can intentionally extract information from the text, draw conclusions, and gain deeper insights. We performed a two-step method with open coding in the first step, followed by axial coding to uncover existing literature themes. The way to do this is to sort through several studies using a mandalay which functions to make it easier to process article profile data.

We reread the article to understand the research problem, conclusions and results, gain deeper insight and select an appropriate theme. Then from the 81 articles obtained in determining the cluster, the researchers used the Vosviewer software to make it easier to classify several clusters from the articles that had been obtained. We apply thematic analysis to identify clusters and subclusters. Similar subclusters were associated with the research theme. The following processed articles using vosviwer are as follows:

From the processed articles, the 7 themes found in vosviwer were obtained, from these seven themes there were several sub-themes that were generated. To find out the seven research themes and the resulting sub-themes, the researchers classify as Table 3.

The phases contained in the summary of the research presentation discuss some of the problems in the research. The next section shows how categories are derived in the resulting cluster. On the other hand, the time of the update of the article with the duration of the article is 2012–2022.

3.3 Discussion

Based on the 7 clusters that have been obtained, it is necessary to analyze the results of each cluster to see the effect of developing the Games learning method in improving entrepreneurial abilities. The results obtained from the cluster are as follows:

The Role of Entrepreneurs Education on Games Learning

Research conducted by [49] on “Entrepreneurship and Education: Creating Business Awareness for Students in East Java Indonesia” explains that the entrepreneurship education program outlines the needs of students to participate in business and commerce. The existence of entrepreneurship education students learn various scientific competencies that can create opportunities from the conditions in the surrounding environment. So entrepreneurship education can not only provide cognitive knowledge but can also create entrepreneurial abilities through learning methods using digital such as learning games. In addition, from several studies conducted by [13, 20, 50] it can be concluded

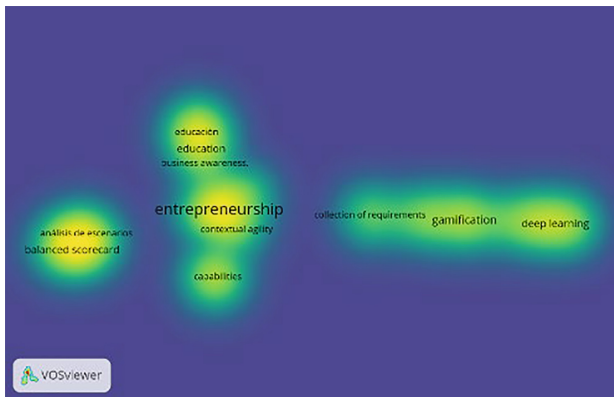
Table 3. Processed Results from the 2022 Vosviwer Cluster.

Cluster	Keywords
1	Scenario Analysis
	Balanced scorecard
	Desarrollo de recursos
	Entrepreneurs
	executive flight simulator
	resource development
	system dynamic
2	Analytics
	Small business development
	business analytics
	business intelligence
	deep neural networks
	fourth industrial revolution
	machine learning
	managerial implications
Research agenda	
3	adaptive tourism recommendations
	Business <i>Games</i> simulations
	Serious <i>Games</i>
	Co-design
4	Business awareness.
	Creativity and innovation
	Education
	Enterprise
5	Capabilities
	Culture
	Digital innovation
	Growth
	Mixed methods
	Start-up
6	Contextual agility
	Coworking spaces

(continued)

Table 3. (continued)

Cluster	Keywords
	Entrepreneurial support organizations
	Market representations
	market shaping
	Contextual agility
	Coworking spaces
7	Family resemblance concept
	Philosophy of science
	Wittgenstein

**Fig. 5.** Overlay Visualization

that with entrepreneurship education, every individual has the abilities and skills needed to start a business, they see opportunities. To do business every individual dares to face a business challenge [23]. So that the abilities and skills of every entrepreneur will be obtained from an entrepreneurship education using more varied learning methods such as the games learning method in improving students' entrepreneurial abilities.

So it can be concluded from this cluster that the role of entrepreneurship education is very significant in improving entrepreneurial abilities, accompanied by the development of digital technology, which has changed so as to allow all learning media to be transferred using technology. The digital role is very supportive in the current entrepreneurship education learning process to facilitate the achievement of the ability to manage a business using a simulation in the game. One form of learning media that uses digital is the Games application learning. Therefore, digital learning methods are very relevant in improving entrepreneurial skills through entrepreneurship education. The existence of games learning applications can lead students' habits in a positive direction [51]. With the support of supporting equipment and adequate facilities in entrepreneurship learning,

students will be able to absorb the information obtained so that the information will be able to create their abilities. Games-based learning media as an alternative that aims to provide a more interesting entrepreneurship learning [52]. In games learning, there are skills in learning including the ability to perform and complete a task efficiently, quickly and accurately.

The Role of Small Business Development on Games Learning

Research conducted by [53] entitled “Case study: Wellness, tourism and small business development in a UK coastal resort: Public engagement in practice” explains that tourism and its potential as a tool for small business development businesses, especially opportunities for tourism entrepreneurs in beach resorts. Knowledge with these businesses to assist in business development by adapting many existing features of tourist resorts and expanding their offerings to a wider market. So that in creating opportunities in the development of coastal businesses, it is necessary to have an education that is more direct in improving abilities and skills. So we need a digital-based education, namely games learning to increase understanding in beach resorts and create opportunities. In addition, several studies conducted by [1, 4, 54] concluded that the development of small businesses has a potential impact in creating new market opportunities. The existence of small businesses will have a significant effect on entrepreneurial growth accompanied by fairly extensive digital developments. So that the community will be able to reach small businesses.

The positive effect of this small business is to build a network of independent businesses that are able to innovate, with proven industry leadership through best practice examples in improving entrepreneurial skills. In addition, the creation of small businesses is a dynamic process, where entrepreneurs evaluate their strategies according to the results they have as their projects develop, taking into account that the strategy with game-based learning methods to be applied to their companies will depend on internal factors, such as resource development. Them, and external factors, such as the characteristics and tendencies of their environment and target market [23].

From this cluster, it can be concluded that the role of the games learning method in the expansion of small businesses requires a games-based simulation learning method. The existence of a game will be able to create the ability to expand in the development of this business. The existence of these small businesses will further package the business using supporting applications so that they will be able to restore the current economic conditions. Small business development can be applied through digital applications in managing the business. In this study, the role of games will be able to change our mindset in managing our business well based on our respective abilities and skills. The role of the games learning method in the development of digital small businesses will be able to create new market opportunities in entrepreneurship. So that learning games become a medium in managing entrepreneurial abilities to build a business and create new market opportunities. The game which aims to develop an entrepreneurial mindset introduces players to the main issues of small business. The game deals with identifying business

opportunities starting from problems or events identifying user needs Planning. Solve problems after innovative or conservative strategies Make decisions for the business.

The Role of Business Games Simulations on Games Learning

Research conducted by [55] with the title “ Education and training of manufacturing and supply chain processes using business simulation Games “ explains that the use of games in education increases business knowledge, leads to a better understanding of business processes, improves decision making, problem solving., and interpersonal communication skills. Common business simulation games with included manufacturing functions are briefly described. Twenty-two specialized manufacturing and supply chain simulations are discussed in detail showing the features and decision-making possibilities.

Research conducted by [56, 57] explains that the main concepts discussed (how to finance a business, marketing issues, etc.) are well integrated in the game. It provides step-by-step feedback on various aspects of the business (price, customer satisfaction, etc.). Simulation games cover the main functions related to sales, product marketing, and small company management. A detailed business simulation that allows the management of computer assembly and small sales companies. The game covers several aspects in detail, grouped into 4 main functional groups: sales and market, administrative organization, operations (design and production), finance Configurable web-based quiz manager which can be used to test the knowledge and skills acquired in several areas. Differ through dyad collaboration and competition among students in the same course.

So it can be concluded that games can be used as a medium that can entertain and please students. Games can reduce anxiety about making mistakes or wrong decisions, because they avoid taking the risk of complex decisions and their eventual negative influence in real life. They apply and validate their knowledge, gained in lectures, and strengthen the link between theory and practice. Games present an additional approach to lectures in developing problem solving skills in higher education programs [58]. This new approach is based on the application of knowledge in practical activities without replacing traditional educational approaches [15]. In this case, a game -based simulation will start a business from scratch, from seeing market opportunities to generating new businesses. So that with this simulation game, it will be able to create the ability of students to manage their business. Games This learning process was created as an ideal method for assessing students’ understanding of knowledge. The reason is that the process of self-engagement promotes responsibility, that is, self-motivation to improve (go to the next level) and succeed. Games allow students to go beyond fun and develop their learning skills namely knowledge acquisition, critical thinking and association.

The Role of Creativity and Innovation in Games Learning

Research conducted by [59] entitled “New transverse proposals for entrepreneurship and innovation for educational programs at the third level of education” explains that positive emotions can increase entrepreneurial success. The success of the entrepreneur is seen from the level of creativity and innovation. Creativity and innovation can be obtained from an entrepreneurial education with a games method that will later be able to create the abilities of students. Entrepreneurs who are passionate about their work

tend to be more successful than others. Success in business ventures lies not solely in the entrepreneur but also from the people around the entrepreneur, namely employees and customers. In addition, several studies conducted by [18, 58, 61] explain that the ability to manage these people plays an important role in the success of a business venture. Emotions influence people's perceptions and attitudes at work. Skills Learning is taken from the term skilled, which includes the ability to perform and complete a task efficiently, quickly and accurately. The word efficient includes the perception of a problem faced from various angles such as the nature, form, system, and behavior of the perceived object. In it lies the element of creativity and tenacity to turn failures and difficulties into victory, as well as the ability to overcome a problem comprehensively "core competencies" and "dynamic capabilities" denote a firm's ability to conserve and renew its capabilities effectively and competitively [57].

At the same time, organizational capabilities directly affect its effectiveness [54], involving repetitive organized activities and explaining and filling the gap between intentions and outcomes [20]. However, capabilities need to be contextualized appropriately to be a source of sustainable competitive advantage [59]. Therefore, building on its culture, the company needs to develop and cultivate distinct capabilities, which will enable it to succeed and fully develop in its area of application. So that creative and innovative skills create a more optimal education.

So in this cluster it can be concluded that the ability will be created from a variety of digital entrepreneurship learning methods. Entrepreneurship education through games requires the ability to create businesses both in terms of students' abilities and creative and innovative students. The capacity to be creative and innovative is the basis for the survival of the organization. Entrepreneurs need to be creative and innovative to ensure that they have an extra competitive advantage over others. The existence of learning games can create creativity and innovation by simulating the game. So that creativity will be able to create a student's ability to grow ideas through creative thinking with the help of hard work and perseverance in it. In addition to creativity, innovation in entrepreneurship is needed, innovation creates the ability to manage the resources owned. So that the innovation that has been developed through the simulation of a games learning method will result in the ability to create a more productive business.

The Role of Start-Ups in Game Learning

Research conducted by [11] with the title "Examining the effect of radical innovation and incremental innovation on leading e-commerce startups by using expectation confirmation model" explains that developing digital startups show a series of characteristics which include: culture agile that combines clans with adhocracy of ability to effectively nurture their absorptive, innovative and adaptive abilities; and human resources with adequate entrepreneurial skills, emotional attachment and fitness with start-ups. In addition, several studies conducted by [65–67] explain that digital entrepreneurship is one of the most important forms of entrepreneurship and has a positive impact on start-up businesses.

However, most digital startups fail to thrive, even though they have the potential to achieve growth. In addition, what constitutes growth is very different for startups compared to established companies: they have limited financial performance, and their growth cannot be accurately measured with metrics such as customers, revenue, profits,

and turnover in the early stages of a new business. Therefore, the first objective of this study is to contribute to the definition of growth by examining the less tangible dimensions of growth. In addition, the second objective is to identify the characteristics of early-stage digital start-ups that are experiencing growth. Startups have the same educational background, after graduating from Business School, and both startups operate. They have participated in and benefited from the services of the same start-up incubator and received mentoring and training. In addition, they both successfully secured venture capital funding. However, they also show some differences. The main one among them is how they use technology.

So the solution in creating a business that will be able to achieve its entire market share is by using digital. To understand and manage digital well, digital-based learning is needed using the Games learning method in creating the entrepreneurial abilities of participants in managing start-up businesses. Games learning will be able to change the mindset of students in building a business. In games there are several kinds of learning projects that will be applied in real life so that they will be able to build a new business.

The Role of Entrepreneurial Support Organizations in Games Learning

Research conducted by [68] with the title “Coworking spaces: An overview and research agenda” explains that within an entrepreneurial organization the study of the movement of coworkers, the conditions under which it can improve entrepreneurial outcomes, and the various streams of research that can be enriched. In particular, it shows that one of the most fundamental aspects of coworking, which distinguishes it from other entrepreneurship support organizations (e.g., accelerators, incubators, creator spaces) is the community aspect. Colleagues will be able to create more effective coordination with the development of an education-based digital media, namely games. So with a co-worker game, it will be simulated to increase the ability to organize a company.

Then from several studies conducted by [67, 68] explained that this reactive entrepreneurship inscription is at the core of understanding the market as an open process. This promises in particular to be of significant value in light of indeterminate ontologies as they relate to the market in form. Alertness means spontaneously spotting a market opportunity that has gone unnoticed by others due to ignorance and incompetence. In creating an ability as an organization consisting of various characteristics of co-workers, it is necessary to have a game -based simulation education. So that with games learning will be able to create agility in the organization. Each level of contextual agility results in market representation. Low agility means that conventional market conceptualizations are shared by many, whereas substantial contextual agility results in creative and unorthodox representations that are shared by few. All subsequent companies would not be in a contextually agile position. The entrepreneurial element relates to generic skills that are not accessible to everyone.

So from this cluster it can be concluded that there is an organization within the company that aims as a forum that creates the entrepreneurial resource capabilities of an organization or company. Ability and skills in an organization will be obtained in an entrepreneurial learning. This learning requires technology that supports the achievement of organizational goals. Supporting technology can be in the form of learning applications, namely the games learning method is simulated as a forum for practicing the activities that exist in the organization or company. The adaptation of games to an

organization provides changes in an organization that will later create new opportunities. So games will create an ability in every organization, both skills and innovation abilities. In addition, the purpose of the games learning application method is how companies are able to carry out management functions more effectively, which is implemented with a business simulation that is implemented through games.

Role of Family Resemblance Concept to Games Learning

Research conducted by [20] entitled “Entrepreneurship as a family resemblance concept: A Wittgensteinian approach to the problem of defining entrepreneurship” explains that family enterprises represent a unique intersection of family and business logic where kinship, loyalty and social ties influence how resources are obtained and used. Since a positive reputation can serve as social insurance that protects families and family enterprises during a crisis, family companies strive to project a positive image and build their entrepreneurial spirit among stakeholders. So that family companies are considered to have good reputations because trustworthy relationships with their stakeholders can create capabilities.

So it can be concluded that strong identification of family members with family business motivates families to pursue business goals. Family businesses can be created through the process of entrepreneurship education. So that a family business education process can be created because of the emergence of opportunities and behaviors that arise in the community. In addition, family businesses can also be implemented through various applications, both in terms of business applications and games. The main determinant of the success of many family business startups is due to the financial support and capabilities they have [71]. The Games method is applied to family businesses aiming to train more creative abilities and later will create new business opportunities. So that the research has a goal in the application of family business applications. Businesses that exist in the family will be created and last a long time with the method of entrepreneurship education. Entrepreneurship education can be obtained anywhere using technology. Technology in the form of learning games will be able to create the ability of families to manage businesses. So that the family business will be able to run for a long time according to the skills possessed.

Future research should give special consideration to the selection of games learning application methods. From the article management that has been carried out using 81 articles that are relevant to the keywords “[games learning](#)” and “entrepreneur” it is obtained that the research agenda that will be developed in the future is about contextual agility. So that future research will examine more deeply about contextual agility in entrepreneurship.

4 Conclusion

Based on the literature review that has been carried out using 81 articles, 7 clusters were obtained that were filtered with several predetermined criteria by obtaining the conclusion that the application of games learning in improving entrepreneurial skills required innovation and creativity in building a business. In addition, entrepreneurial organizations are very supportive in organizing buying and selling activities. So that in

creating entrepreneurial abilities, learning games are needed that create innovation and creativity in business development.

References

1. F. Amri, E. T. Djatmika, H. Wahyono, and S. U. M. Widjaja, "The effect of using simulation on developing students' character education in learning economics," *Int. J. Instr.*, vol. 13, no. 4, pp. 375–392, 2020, <https://doi.org/10.29333/iji.2020.13424a>.
2. N. A. Basyah, A. Muslem, and B. Usman, "The effectiveness of using the jigsaw model to improve students' economics teaching-learning achievement," *Stanisław Juszczak. tner.polsl.pl*, 2018, [Online]. Available: https://tner.polsl.pl/dok/volumes/tner_1_2018b.pdf#page=30.
3. A. Oktavio, T. S. Kaihatu, and E. W. Kartika, Learning orientation, entrepreneurial orientation, innovation and their impacts on new hotel performance: Evidence from Surabaya. *dspace.uc.ac.id*, 2019.
4. L. I. Dobrescu, B. Greiner, and A. Motta, "Learning economics concepts through game-play: An experiment," *Int. J. Educ. Res.*, vol. 69, pp. 23–37, 2015, <https://doi.org/10.1016/j.ijer.2014.08.005>.
5. U. Iakovleva, T. Kolvereid, L., & Stephan, "Entrepreneurial intentions in developing and developed countries.," *Educ. training.*, 2011.
6. M. O'Sullivan and C. Sheahan, "Using serious games to inform mass customization production methods from the fuzzy front-end of new product development," *Procedia Manuf.*, vol. 38, pp. 478–487, 2019, <https://doi.org/10.1016/j.promfg.2020.01.061>.
7. M. C. Ramos-Vega, V. M. Palma-Morales, D. Pérez-Marín, and J. M. Moguerza, "Stimulating children's engagement with an educational serious videogame using Lean UX co-design," *Entertain. Comput.*, vol. 38, p. 100405, 2021, <https://doi.org/10.1016/j.entcom.2021.100405>.
8. E. Dale, "Audiovisual methods in teaching," 1969.
9. D. Vusić and R. Geček, "Instructional design in game based learning and applications used in educational systems," *Teh. Glas.*, vol. 12, no. 1, pp. 11–17, 2018, <https://doi.org/10.31803/tg-20180312141348>.
10. S. Barzilai and I. Blau, "Scaffolding game-based learning: Impact on learning achievements, perceived learning, and game experiences," *Comput. Educ.*, vol. 70, pp. 65–79, 2014, <https://doi.org/10.1016/j.compedu.2013.08.003>.
11. Q. Li, L. Zhang, Y. Chen, S. Shao, T. Wang, and..., "Research on the Influence of Farmers' Entrepreneurial Motivation on Entrepreneurial Performance," ..., *Economy and Law* *atlantis-press.com*, 2021, [Online]. Available: <https://www.atlantis-press.com/article/125960771.pdf>.
12. G. Vardaxoglou and E. Baralou, "Developing a platform for serious gaming: Open innovation through closed innovation," *Procedia Comput. Sci.*, vol. 15, pp. 111–121, 2012, <https://doi.org/10.1016/j.procs.2012.10.063>.
13. A. Charpentier, R. Élie, and C. Remlinger, Reinforcement Learning in Economics and Finance, vol. 4. 2021.
14. A. Engelen, V. Gupta, L. Strenger, and M. Brettel, "Entrepreneurial Orientation, Firm Performance, and the Moderating Role of Transformational Leadership Behaviors," *J. Manage.*, vol. 41, no. 4, pp. 1069–1097, 2015, <https://doi.org/10.1177/0149206312455244>.
15. C. Reise, B. Müller, and G. Seliger, "Resource efficiency learning game - Electric scooter game," *Procedia CIRP*, vol. 15, pp. 355–360, 2014, <https://doi.org/10.1016/j.procir.2014.06.090>.

16. E. Fohim and S. Jolly, "What's underneath? Social skills throughout sustainability transitions," *Environ. Innov. Soc. Transitions*, vol. 40, pp. 348–366, 2021, <https://doi.org/10.1016/j.eist.2021.09.001>.
17. A. Ampatzoglou, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "The financial aspect of managing technical debt: A systematic literature review," *Inf. Softw. Technol.*, vol. 64, pp. 52–73, 2015.
18. B. Etinkaya, "of enterprise education programs in four european countries. Education Training," Ankara Detay Publ., 2011.
19. G. M. Hoyt and K. M. McGoldrick, *International Handbook on Teaching and Learning Economics*. books.google.com, 2011.
20. C. L. Wei, Y. M. Wang, H. H. Lin, Y. S. Wang, and J. L. Huang, "Developing and validating a business simulation systems success model in the context of management education," *Int. J. Manag. Educ.*, vol. 20, no. 2, p. 100634, 2022, <https://doi.org/10.1016/j.ijme.2022.100634>.
21. B. P. Isaacs E., Visser K., Friedrich C., "Entrepreneurship education and training at the Further Education and Training (FET) level in South Africa," *South African J. Educ.*, vol. 27(4), p., 2007.
22. S. Radhakrishnan, "'Low Profile' or Entrepreneurial? Gender, Class, and Cultural Adaptation in the Global Microfinance Industry," *World Dev.*, vol. 74, pp. 264–274, 2015, <https://doi.org/10.1016/j.worlddev.2015.05.017>.
23. D. Vidal Flores and R. Domenge Muñoz, "Simulador de vuelo ejecutivo como medio de aprendizaje en la planeación de recursos de nuevas empresas bajo el enfoque del marcador balanceado," *Contaduría y Adm.*, vol. 62, no. 2, pp. 577–599, 2017, <https://doi.org/10.1016/j.cya.2017.02.005>.
24. T. Kikot, G. Costa, R. Magalhães, and S. Fernandes, "Simulation Games as Tools for Integrative Dynamic Learning: The Case of the Management Course at the University of Algarve," *Procedia Technol.*, vol. 9, pp. 11–21, 2013, <https://doi.org/10.1016/j.protcy.2013.12.002>.
25. L. Yi, H. Duan, and Y. Cao, "Study on the Cultivation of College Students' Entrepreneurial Ability from the" Commercial Warfare Practice Platform." *webofproceedings.org*, 2018, [Online]. Available: https://webofproceedings.org/proceedings_series/ESSP/IWASS2018/IWASS1231155.pdf.
26. E. Toone, "The role of higher education in entrepreneurship." 2016.
27. N. M. N. Ibrahim and R. Mahmood, "Mediating role of competitive advantage on the relationship between entrepreneurial orientation and the performance of small and medium enterprises," *International business management*. researchgate.net, 2016, [Online]. Available: https://www.researchgate.net/profile/Mohammad-Nura-Ibrahim-Naala/publication/320287967_Mediating_Role_of_Competitive_Advantage_on_the_Relationship_Between_Entrepreneurial_Orientation_and_the_Performance_of_Small_and_Medium_Enterprises/links/59db961ca6fdcc.
28. M. Zhang and L. Zhu, "Practical Teaching System of Electronic Information Engineering Major Based on Cultivation of Innovative and Entrepreneurial Ability," ... *Conf. Appl. Tech. Cyber ...*, 2019, [Online]. Available: https://doi.org/10.1007/978-3-030-25128-4_270.
29. C. S. Mishra and R. K. Zachary, "The theory of entrepreneurship," *Entrepreneurship research journal*. degruyter.com, 2015, [Online]. Available: <https://doi.org/10.1515/erj-2015-0042>.
30. E. Sugiharti and A. Suyitno, "Improving of Problem Solving Ability of Senior High School Strudents Through Aplication of TPS Based on E-learning in Mathematics Lesson," *International Journal of Education and Research*. ijern.com, 2015, [Online]. Available: <http://ijern.com/journal/2015/February-2015/31.pdf>.
31. J. Gao, Z. Guo, and Y. Xiao, "Research on Cultivation of Innovation and Entrepreneurship Ability of Applied Talents under the Concept of" New Engineering";" 2021 2nd Int. Conf. Comput. ..., 2021, [Online]. Available: <https://doi.org/10.1145/3456887.3457060>.

32. J. S. Allen, R. M. Stevenson, E. H. O'Boyle, and..., "What matters more for entrepreneurship success? A meta-analysis comparing general mental ability and emotional intelligence in entrepreneurial settings," ... *Entrep.*, 2021, [Online]. Available: <https://doi.org/10.1002/sej.1377>.
33. L. Johnstone, M. P. Monteiro, I. Ferreira, and..., "Language ability and entrepreneurship education: Necessary skills for Europe's start-ups?," ... *Entrepreneurship*. Springer, 2018, [Online]. Available: <https://doi.org/10.1007/s10843-018-0230-y>.
34. R. Gao, "Research on the Cultivation of College Students' Innovative and Entrepreneurship Ability Based on the Internet Technology," *J. Phys. Conf. Ser.*, 2021, [Online]. Available: <https://doi.org/10.1088/1742-6596/1992/2/022048>.
35. and R. G. Vusić, Damir, "Instructional Design in Game based learning and Applications Used in Educational Systems." *Tehnički glasnik,* vol. 12(1): 11–, 2018.
36. M. Jaderberg et al., "Human-level performance in 3D multiplayer games with population-based reinforcement learning," *Science (80-.)*, vol. 364, no. 6443, pp. 859–865, 2019, <https://doi.org/10.1126/science.aau6249>.
37. Y. Liang, M. C. Machado, E. Talvitie, and M. Bowling, "State of the art control of atari games using shallow reinforcement learning," *arXiv Prepr. arXiv*, 2015, [Online]. Available: <https://arxiv.org/abs/1512.01563>.
38. B. Gros, "Digital games in education: Me design of games-based learning environments," *J. Res. Technol. Educ.*, vol. 40, no. 1, pp. 23–38, 2007, <https://doi.org/10.1080/15391523.2007.10782494>.
39. Y. Zhao, S. von Delft, A. Morgan-Thomas, and T. Buck, "The evolution of platform business models: Exploring competitive battles in the world of platforms," *Long Range Plann.*, vol. 53, no. 4, p. 101892, 2020, <https://doi.org/10.1016/j.lrp.2019.101892>.
40. J. J. Ferreira, C. I. Fernandes, F. Schiavone, and R. V Mahto, "Sustainability in family business – A bibliometric study and a research agenda," *Technol. Forecast. Soc. Change*, vol. 173, p. 121077, 2021, <https://doi.org/10.1016/j.techfore.2021.121077>.
41. J. W. Knopf, "Doing a literature review," *PS - Polit. Sci. Polit.*, vol. 39, no. 1, pp. 127–132, 2006, <https://doi.org/10.1017/S1049096506060264>.
42. M. Grijalvo, A. Segura, and Y. Núñez, "Computer-based business games in higher education: A proposal of a gamified learning framework," *Technological Forecasting and Social Elsevier*, 2022, [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S0040162522001299>.
43. J. C. Fernández-Zamora and..., "Implementation of a gamification platform in a master degree (Master in Economics)," *WPOM-Working Pap.*, 2017, [Online]. Available: <https://polipa.pers.upv.es/index.php/WPOM/article/view/7431>.
44. B. Apolloni, G. Galliani, C. Zizzo, F. Epifania, L. Crosta, and I. Cesareo, "Socializing entrepreneurship," *Procedia Comput. Sci.*, vol. 22, pp. 349–358, 2013, <https://doi.org/10.1016/j.procs.2013.09.112>.
45. J. O. Onginjo, D. M. Zhou, T. F. Berhanu, and S. W. G. Belihu, "Analyzing the impact of social capital on US based Kickstarter projects outcome," *Heliyon*, vol. 7, no. 7, p. e07425, 2021, <https://doi.org/10.1016/j.heliyon.2021.e07425>.
46. I. Mayer, "Towards a comprehensive methodology for the research and evaluation of serious games," *Procedia Comput. Sci.*, vol. 15, pp. 233–247, 2012, <https://doi.org/10.1016/j.procs.2012.10.075>.
47. S. J. Page, H. Hartwell, N. Johns, A. Fyall, A. Ladkin, and A. Hemingway, "Case study: Wellness, tourism and small business development in a UK coastal resort: Public engagement in practice," *Tour. Manag.*, vol. 60, pp. 466–477, 2017, <https://doi.org/10.1016/j.tourman.2016.12.014>.

48. A. K. Sahu, R. K. Padhy, and A. Dhir, "Envisioning the future of behavioral decision-making: A systematic literature review of behavioral reasoning theory," *Australas. Mark. J.*, vol. 28, no. 4, pp. 145–159, 2020, <https://doi.org/10.1016/j.ausmj.2020.05.001>.
49. K. Lubinski and D. K. Tama, "The observed effects of distance learning on curriculum implementation in management and business studies," *Procedia Comput. Sci.*, vol. 192, pp. 2540–2549, 2021, <https://doi.org/10.1016/j.procs.2021.09.023>.
50. D. H. Haneberg and L. Aaboen, "Incubation of technology-based student ventures: The importance of networking and team recruitment," *Technol. Soc.*, vol. 63, p. 101402, 2020, <https://doi.org/10.1016/j.techsoc.2020.101402>.
51. L. Li, "'Green' effects of hybrid actors through carbon trading: Cases in Beijing," *Glob. Transitions Proc.*, vol. 1, no. 1, pp. 13–22, 2020, <https://doi.org/10.1016/j.gltp.2020.03.001>.
52. T. Rayna and L. Striukova, "Assessing the effect of 3D printing technologies on entrepreneurship: An exploratory study," *Technol. Forecast. Soc. Change*, vol. 164, p. 120483, 2021, <https://doi.org/10.1016/j.techfore.2020.120483>.
53. M. Frolova and A. Taranov, "Using a process approach to justify necessity for computerization of business processes in institutions of additional education," *Procedia Comput. Sci.*, vol. 169, no. 2019, pp. 513–518, 2020, <https://doi.org/10.1016/j.procs.2020.02.216>.
54. J. R. Weintre, "Borderless Communities & Nations with Borders Challenges of Globalisation," *Proceeding 3rd Int. Indones. Forum Asian Stud.*, 2017.
55. P. Nie, T. Matsuhisa, X. H. Wang, and P. Zhang, *Game theory and applications in economics*. hindawi.com, 2014.
56. S. Muhamad, N. K. A. Rashid, N. E. Hussain, and..., "Resilience as a moderator of government and family support in explaining entrepreneurial interest and readiness among single mothers," *J. Bus. ...*, 2020, [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S2352673419300587>.
57. M. I. Luis-Rico, M. C. Escolar-Llamazares, and..., "The association of parental interest in entrepreneurship with the entrepreneurial interest of Spanish youth," *Int. J. ...*, 2020, [Online]. Available: <https://www.mdpi.com/758348>.
58. A. Jalali, M. Jaafar, and T. Ramayah, "Entrepreneurial orientation and performance: the interaction effect of customer capital," *World J. Entrep. Manag. Sustain. Dev.*, vol. 10, no. 1, pp. 48–68, 2014, <https://doi.org/10.1108/wjemds-05-2013-0030>.
59. A. Hidayatno, Zulkarnain, R. G. Hasibuan, G. C. Wardana Nimpuno, and A. R. Destyanto, "Designing a serious simulation game as a learning media of sustainable supply chain management for biofuel production," *Energy Procedia*, vol. 156, pp. 43–47, 2019, <https://doi.org/10.1016/j.egypro.2018.11.083>.
60. J. Gámez Gutiérrez and J. E. Garzón Baquero, "Nueva propuesta transversal de emprendimiento e innovación para programas educativos en el tercer nivel de educación," *Contaduría y Adm.*, vol. 62, no. 1, pp. 239–261, 2017, <https://doi.org/10.1016/j.cya.2016.10.005>.
61. S. A. Olugbola, "Exploring entrepreneurial readiness of youth and startup success components: Entrepreneurship training as a moderator," *Journal of innovation & Knowledge*. Elsevier, 2017, [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S2444569X1730001X>.
62. N. Gjeldum, M. Mladineo, and I. Veza, "Transfer of Model of Innovative Smart Factory to Croatian Economy Using Lean Learning Factory," *Procedia CIRP*, vol. 54, pp. 158–163, 2016, <https://doi.org/10.1016/j.procir.2016.06.096>.
63. V. Valentina, S. Marius-Răzvan, L. Ioana-Alexandra, and A. Stroe, "Innovative Valuing of the Cultural Heritage Assets. Economic Implication on Local Employability, Small Entrepreneurship Development and Social Inclusion," *Procedia - Soc. Behav. Sci.*, vol. 188, pp. 16–26, 2015, <https://doi.org/10.1016/j.sbspro.2015.03.334>.

64. D. Leunbach, "Entrepreneurship as a family resemblance concept: A Wittgensteinian approach to the problem of defining entrepreneurship," *Scand. J. Manag.*, vol. 37, no. 1, p. 101141, 2021, <https://doi.org/10.1016/j.scaman.2021.101141>.
65. M. M. van Wyk, "Measuring Students' Attitudes to Economics Education: A Factorial Analysis Approach," *J. Soc. Sci.*, 2012, <https://doi.org/10.1080/09718923.2012.11893012>.
66. T. Nguyen and A. Trimarchi, "Active Learning in Introductory Economics: Do MyEconLab and Aplia Make Any Difference?," ... *J. Scholarsh. Teach. Learn.*, 2010, [Online]. Available: <https://eric.ed.gov/?id=EJ1136141>.
67. C. L. Lawson and L. L. Lawson, "Adventures in learning: Creating role playing video games to teach and learn economics," *Int. Rev. Econ. Educ.*, 2010, [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S147738801530058X>.
68. L. Remnova and K. Shtyrkhun, "Creative Learning of Finance and Economics through Gamification," ... *Methods for Economics and ... gameblog.woc.org.ua*, pp. 69–82, 2020, <https://doi.org/10.18690/978-961-286-356-2.5>.
69. R. Tovinakere and S. Fernandes, "Analysis of Technologically Interactive Education at Home – An Exploratory Research on Consumer Behavior," *Procedia Econ. Financ.*, vol. 11, pp. 572–582, 2014, [https://doi.org/10.1016/s2212-5671\(14\)00222-6](https://doi.org/10.1016/s2212-5671(14)00222-6).
70. M. Kraus, S. Feuerriegel, and A. Oztekin, "Deep learning in business analytics and operations research: Models, applications and managerial implications," *Eur. J. Oper. Res.*, vol. 281, no. 3, pp. 628–641, 2020, <https://doi.org/10.1016/j.ejor.2019.09.018>.
71. L. Samuelson, "Game theory in economics and beyond," *Vopr. Ekon.*, no. 5, pp. 89–115, 2017, <https://doi.org/10.32609/0042-8736-2017-5-89-115>.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

