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Gamification of the Online Course “Investment Readiness”

The Educational Online Course for Scaling Business

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ABSTRACT

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This paper explains online learning and gamification, as two emerging trends in the fields of online education, share common attributes and characteristics. Despite the prevalence of numerous studies, the theoretical foundation for the integration of gamification is fragmented and lacks a comprehensive framework in academic literature. Most of these studies use qualitative methods, while there is a lack of quantitative studies.

This paper contains an introduction, a theoretical part that presents a brief excursus into the history of distance learning, online education, and gamification tendencies, as well as research methods. It also has an empirical part, including data analysis and results leading to the evaluation and conclusion.

The study used mixed-methods research combining qualitative and quantitative methods to collect and analyze data from multiple sources, with the aim of providing a more comprehensive and nuanced understanding of the research topic.

In conclusion, the results of the research show the positive impact of gamification on the motivation of learners taking the online course Investment Readiness. The grounds for these conclusions are given by both the review of theoretical sources and empirical studies presented in this paper. The information presented in the thesis has practical importance for further modification of the online course in order to improve the engagement and completion rates.

Keywords: E-learning, gamification of education, elements of gamification

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1 INTRODUCTION

The online training course "Investment Readiness" was created by Business Oulu on the Howspace.fi platform as a supportive tool of the business incubator program for entrepreneurs. Business Oulu is a municipal organization whose goal is to create a business-friendly environment in the Oulu region that generates opportunities for the success of companies and entrepreneurs. The goal of the "Investment Readiness" online course is to provide the entrepreneur with the information about the main criteria that investors are guided by evaluating the company for financial support. Howspace is a digital platform which is used for hosting the course, it was founded in 2008 in Finland. Howspace is a shared environment for online live (synchronous) learning where the communication between teacher and learners happens in real time. Howspace also includes functionality for hosting learning materials of asynchronous trainings, giving Business Oulu the opportunity to create the "Investment Readiness" course. Usually, the use of third-party software such as Howspace imposes certain restrictions on customizability that limit functionality required to implement some of the more elaborate gamification elements into "Investment Readiness". On the other hand, some tools in the Howspace toolbar can be customized by letting the administrator of the website to make basic modifications without programming.

The main question of the study is "What could be some ways for utilizing the elements of gamification for retaining the attention of the target audience in the online course "Investment Readiness?" Thus, the object of qualitative research is the target audience of online courses to identify the most effective gamification tools.

The course consists of 12 lessons. Each lesson consists of one or more combinations of articles, short videos of the lesson topic, and a section explaining the mistakes startups often make in specific funding scenarios. Also, useful links to other sources are provided. Despite the perceived practicality of the material, there is a problem of motivation for those who sign up for the course, as they tend to study the first few pages without going through the whole course. Meanwhile, that this course is included in the business incubator program and provides important information for entrepreneurs who have serious purpose for scaling their business. Business Oulu deliberately organizes pitching for startups, where investors from various funds are invited. In theory, startup owners should take this course and consider the recommendations discussed in the lessons and exercises. Thus, the problem to be solved is how to make the course "Readiness for Investment" more exciting and motivating.

The main task of “Investment Readiness” gamification is to ensure that the course’s participants complete most of the lessons presented. The purpose of this work is to study the common trends in online learning and gamification, detect the different ways of gamification currently in use, and determine which gamification elements may be most suitable for a given training course.

2 E-LEARNING SPECIFIC

The Internet has become an indispensable component of contemporary society, serving a wide range of purposes including information retrieval, advertising dissemination, entertainment, and social interaction. Online education is also an incredibly fast-growing industry, and this fact is proven by statistical data. A special impetus to development occurred during the lockdown period, when millions of people were forced to take advantage of this opportunity. There is an illustration of COVID impact on global education in Image 2.1 provided by statista.com (Statista 2022)

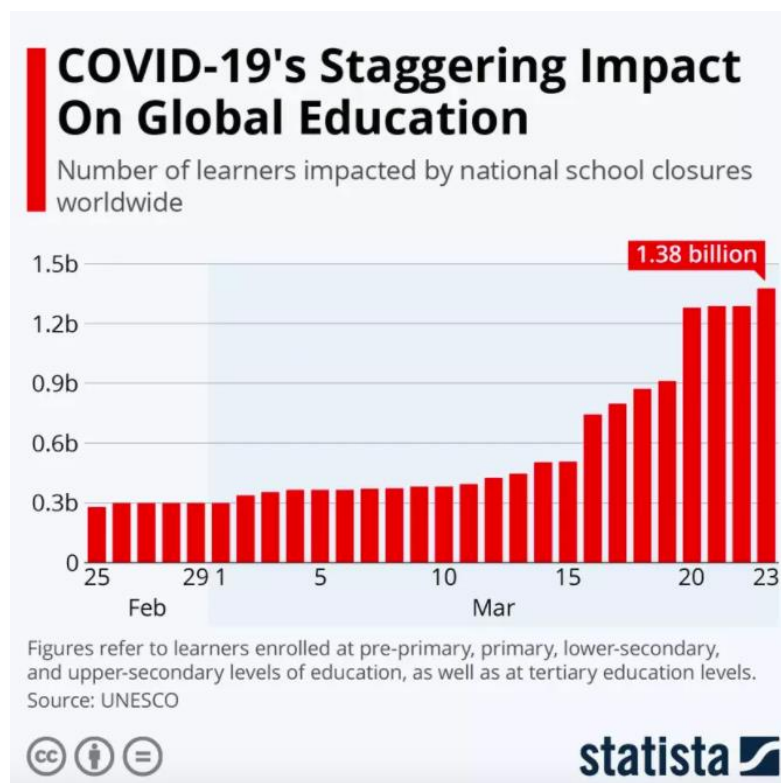


Image 2.1 COVID-19's Staggering Impact on Global Education.

Online education provides diverse opportunities to study remotely for a variety of purposes, ranging from short trainings that have more to do with entertainment than learning, and ending with online master level degree certificates. As states by many statistical and research organization, for example Technavio, a leading market research company in 2022 the online education market reach capitalization of 165 billion dollars and predicted the growth to 172 billions in 2026 (Technavio 2022). Image 2.2 provides the data publicized on the Polaris Market Research website.

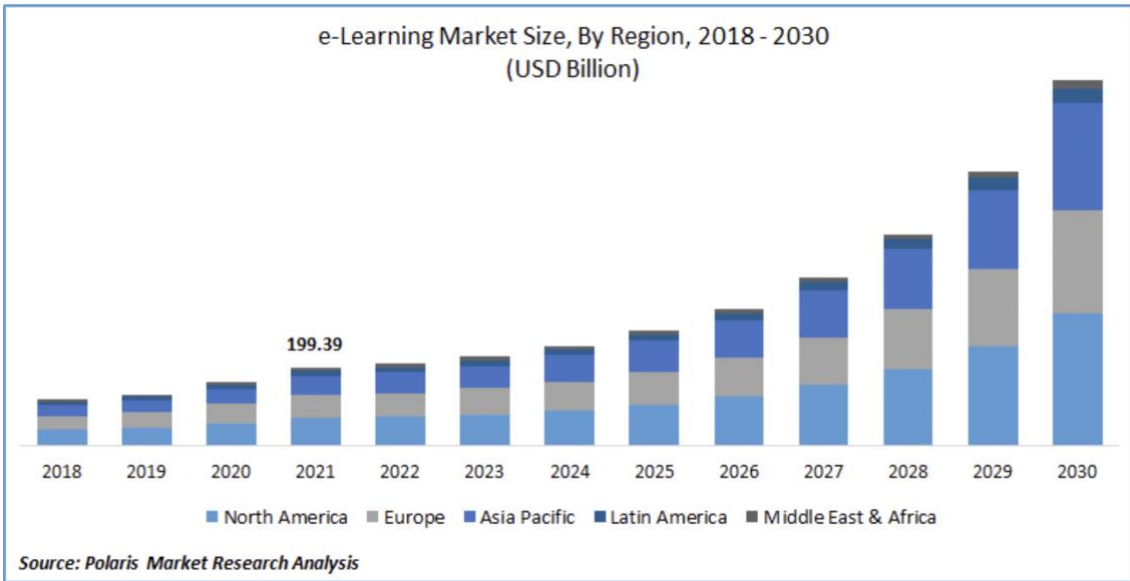


Image 2.2 E-learning Market Size, By Region, 2018-2030.

There is one more illustration of the e-learning growth – the data from the most popular online learning platform Coursera.com, where showed the learners accessing increasing from 2.1 million in 2016 to 92 million in 2021 (Coursera 2021).

Coursera Impact Report 2021 Executive summary

More learners are accessing online learning

The demand for online learning on Coursera continues to outpace pre-pandemic levels.

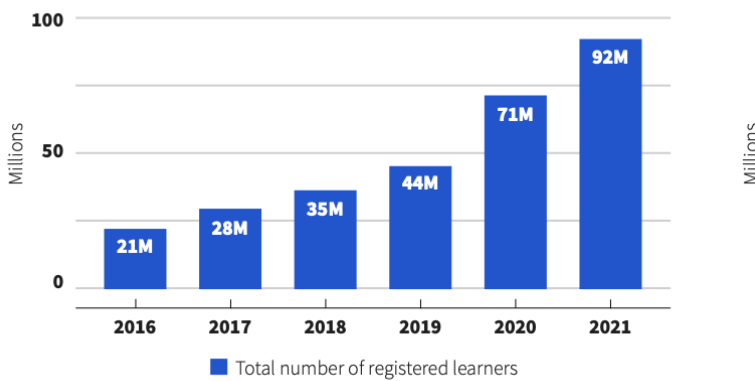


Image 2.3 Learners Accessing Growth on Coursera Learning Platform.

2.1 Definition of Online Learning

The most popular definitions of online education or e-learning are based on the channels of communication between the information providers such as teachers, coaches, experts, and the receivers – learners. Ruth Clark and Richard Mayer, a famous educational psychologists and researchers provide the following statement: “We define e-learning as instruction delivered on a digital device (such as a desktop computer, laptop computer, tablet, or smartphone) that is intended to support learning” (Clark&Mayer 2016).

Sarah Guri-Rosenbilt, the professor from Open University of Israel, mentioned the possibility to combine traditional offline approach in education with online teaching. She determined e-learning as a usage of electronic media for different learning purposes, ranging from add-on functions for traditional classroom teaching to substitution of face-to-face meetings with online encounters (Guri-Rosenbilt 2005).

Valentina Arkorful, an expert of Distance Education, University of Cape Coast gave the definition of online education emphasizing its function to “provide access to online resources for supplying the teaching and learning by using information and communication technologies” (Arkorful 2014).

Researchers often emphasize the flexibility and accessibility of e-learning in their definitions. In their opinion, this is an educational experience without physical barriers, which allows students to take part in lectures and communicate with instructors from any location (Sedivy-Benton 2014). The practical narrowing, which could be used for defining “Investment Readiness” online course provided by Paul Bacsich, who underlines e-learning in corporate training perspective, is that in corporate training online learning generally means accessing short training modules which include specific topics, such as quality and modify practices, which are available for employees as self-study units, sometimes by the corporate intranet only (Bacsich 2019).

Recent forecasts anticipate that the corporate e-learning market will grow an average of 10.5% per year, reaching 44.6 billion dollars by 2027. E-learning in Europe progress is predicted to increase even faster than the global average. According to Technavio’s data, the European e-learning market would grow an average of 14% annually over five years until 2024 (Explodingtopics 2021). Meaningful, that 27% of people aged 16 to 74 surveyed in the EU reported that they had completed

at least one online course during the last three months or otherwise used online learning materials in 2020 (Eurostat 2022)

2.2 History of Online Education

Hope Kentnor, the expert in distance education, described the stages of distance learning developing including the online learning history. The first attempts to use computer technology to teach mathematics to elementary school students were made as early as the 1960s, when Stanford University teachers used computers and teletypes in the curriculum. In the same year, University of Illinois had created an Intranet for its students. Computer terminals of the university had an internal connection between themselves, and users could independently study the materials, as well as listen to the recordings of lectures. Later, many libraries of universities and colleges have implemented similar technology. Students got access to the diverse content using library terminals (Kentnor 2015). In 1999 Elliot Masie, researcher and expert of educational technologies used the term “e-learning” at TechLearn Conference for the first time (Cross 2004).

According to Kentnor, in the 1980s and 1990s, the concept of distance learning emerged, with universities and colleges offering courses and degrees through correspondence, video conferencing, and other remote learning methods (Kentnor 2015). In the late 1990s, online learning platforms such as Blackboard and Moodle were developed, which allowed instructors to organize and manage online courses, and students to access learning materials and interact with instructors and peers online (Arbaugh 2014).

Intensive development of online education began in 2011, when Sebastian Thrun and Peter Norvig from Stanford University created an open online course "Artificial Intelligence" and 160,000 students from all over the world signed up for it. Massive open online courses (MOOCs) are often free or available at relatively low cost, many types of courses from professionals and educational organization, including the leading universities and institutions around the world, can be accessed from any device with an internet connection. Currently, millions of learners register for MOOCs each year (Jordan 2014).

Online education is constantly transforming and becoming more personalized, adapting to the needs and preferences of individual learners. The technical possibilities of artificial intelligence and machine learning are being used increasingly (Baker 2014).

2.3 Types of Online Education

The general classification of e-learning types was provided by many studies. There are three main types of online learning: asynchronous e-learning, synchronous e-learning and hybrid or blended online courses (Clark&Mayer 2016). Further, these three categories will be considered more detailed, but it is necessary to mention that there are several sorts of online learning separated into their own types.

Mobile learning is designed for learning using mobile devices such as smartphones and tablets. Mobile learning content is often designed to be brief and easily digestible and can be accessed on the go (Ally&Prieto 2014).

In fact, many online courses and learning platforms incorporate multiple types of e-learning to maintain a more comprehensive and personalized studying experience for learners. For example, Park applies that a course might use microlearning to deliver short, focused bursts of content, while also incorporating gamification elements to increase engagement and motivation in his article “Pedagogical Framework for Mobile Learning” (Park 2007). Additionally, in Park’s opinion, adaptive learning systems can be combined with mobile learning to deliver personalized, on-the-go learning experiences. The flexibility and versatility of online education make it easy to combine different types of e-learning to suit the individual needs and preferences of learners (Park 2007).

2.3.1 Asynchronous e-learning

Asynchronous e-learning is often used in situations where learners are geographically dispersed, have different schedules, or time zones, or prefer to learn independently (Park 2007).

Asynchronous learning is educational practice when students study materials, submit tasks and assignments that possible to implement at learner’s convenient time at their own place without contacting the teacher. Before the internet era it could be provided by sending learning packages by mail providing studying in the form of distance education (Park 2007).

According to Park, this type of e-learning ensures support for the educational process when the participants - teachers and students, are not online at the same time, and usually involves self-placed modules, pre-recorded videos, discussion boards, and other interactive elements that can be accessed and completed at any time. They could use different communication tools such as email, discussion forums, and other means to transfer texts and files to share information (Park 2007).

Stefan Hrastinski from KHT Royal Institute states that asynchronous nature of communication in online learning affords learners more time to devote towards the refinement of their assignments. Consequently, the quality of these assignments is higher, as learners can engage in more thoughtful and deliberate processes compared to the limitations imposed by synchronous communication (Hrastinski 2007).

2.3.2 Synchronous e-learning

Hope Kentnor considers synchronous e-learning, also known as real-time or live e-learning, as a type of online learning that occurs in real-time, where learners and teacher interact and communicate with each other simultaneously (Kentnor 2015). This is typically accomplished by web conferencing or video conferencing application software, which allows learners to attend virtual classes, participate in discussions, and engage in activities in real-time. Synchronous e-learning can be conducted in a diversity of formats, such as live webinars, virtual classrooms, and online meetings, and can provide a more associative and attractive learning experience than asynchronous e-learning (Park 2007).

Park supposes that the real-time interaction between learners and instructors increases engagement and motivation. Learners can collaborate with each other in real-time, which can cultivate a sense of community and encourage peer-to-peer learning. Immediate feedback could be received from instructors and peers, which can help to achieve better concepts understanding and make progress of studying quicker. Park emphasizes that synchronous e-learning can offer more flexibility than traditional classroom learning, as learners can participate from any location with an internet connection. In same time technical issues such as slow internet connection, audio or video problems can disrupt the learning process. Synchronous e-learning requires learners to be available at specific times, which may not be convenient for all learner. Synchronous e-learning

sessions are usually designed for a group of learners, which may not allow for personalized learning experiences. (Park 2007).

2.3.3 Blended e-learning

Blended learning is a combination of traditional learning methods such as lectures, seminars and face-to-face meetings and various elements of e-learning. Thus, a system of more flexible interaction between teacher and students can be created. (Graham 2006)

According to many researchers, the blended learning is the most preferable learning scheme that provides sufficient guidance from the teacher and gives the opportunity for socialization and face-to-face interaction, as well as dynamism and flexibility, which is typical for online learning (Shand 2015).

The main advantage of blended learning is the opportunity for the student to learn at their own individual level, as well as achieve their individual learning goals. The same is with most types of online courses, blended learning provides flexibility for students to learn at their own pace, while also providing the structure of in-person instruction. Blended learning provides a personalized learning experience tailored to the individual needs, interests, and learning styles of students. Generally, blended learning can increase student engagement using interactive online tools and resources, as well as the opportunity for more individualized attention from instructors. It can be a cost-effective solution for educational institutions, as it reduces the need for physical classroom space and can lower transportation costs (Shand 2015).

Similar with other online learning options, blended learning relies on technology, which can lead to technical difficulties such as internet connection, hardware defects, or software glitches that can negatively impact the learning process (Shand 2015). Another important point: blended learning requires students to have enough motivation and discipline to keep up with the online part of the course. From the teacher's perspective, it requires training and support for instructors to effectively use online tools and resources, which can be time-consuming. Blended learning seriously limits social interaction between students and instructors, which may lead to decreased motivation and engagement in the learning process (Shand 2015).

2.4 Benefits and Drawbacks of Online Education

The discussions about the effectiveness of online learning and the real value of such education do not cease among researchers. Paul Bacsich describing modern learning technics states that the main advantages of e-learning are flexibility, self-pacing for an individual student in terms of time he needs for completing the course, geographic accessibility, the ability to re-take learning material at any time, cost effectiveness, and even objectivity of assessments (Bacsich 2019). At the same time, as Valentina Arkorful mentioned in the article in International Journal of Education and Research, successful learning in online courses requires high intrinsic motivation and the ability to work independently. This is the most often mentioned drawback of e-learning. Other disadvantages, as, are technical requirements – access to internet, computer, or laptop; lack of interaction and socialization; as well as easier possibility of cheating and plagiarism comparing with traditional studying (Arkorful 2014).

Ruth C. Clark insists that when companies consider online learning as a way to save costs and time, for instance traveling expenses, they are not considered that employees' knowledge and skills actually do not perceive effectively and do not provide desired job outcomes. Without the qualitative design and relevant instructions embedded in the e-learning products the savings are only an illusion (Clark 2016, 2).

Some of the essential aspects are driving the growth of e-learning. For example, there is crucially escalate demand for cost-effective and flexible learning options. Rapidly advancing technology and the increasing availability of high-speed internet also provides more opportunities for obtaining education using online resources. Growing focus on personalized and adaptive learning experiences gives additional advantages to online education. The need for upskilling and reskilling in response to changing job market demands also could be considered (WorldEconomicReport 2020).

Overall, the trend towards e-learning is expected to continue to grow, with more individuals and organizations recognizing the benefits and convenience of online education.

3 GAMIFICATION OF ONLINE EDUCATION

Gamification is the process of incorporating game design principles and mechanics into non-game settings to engage and inspire action of users. It includes utilizing game elements, such as points, badges, leaderboards, challenges, and rewards, to evoke a sense of achievement, and fun in activities that are typically not considered games (Deterding 2015).

The aim of gamification is to raise engagement and motivation by tapping into the natural human desire for achievement, recognition, and social interaction. By using game mechanics to make non-game activities more enjoyable and meaningful, gamification can encourage people to learn, work, exercise, or engage in other activities that might otherwise be considered tedious or uninteresting (Huotari&Hamari 2012).

Gamification is commonly used in various industries and contexts, including education, marketing, healthcare, and employee training. It has been demonstrated to have a positive effect on motivation, engagement, and learning outcomes. As a result, it has grown in popularity among businesses looking to boost productivity, customer satisfaction, and performance (Hamari&Koivisto 2014).

3.1 Definitions of Gamification

In the marketing and communications literature gamification is defined as a process of enhancing services with motivational affordances in order to invoke gaming experiences and further behavioral outcomes. (Hamari&Koivisto 2014)

Kevin Werbach and Dan Hunter determine gamification as use of game elements and game design technics in non-game context, where “game element” presented by the visual graphical representation, also budes, points and avatar, as well as regular design patterns. The notion that there are these regular design patterns is something that's common across games as well as gamified services. Another term which is used in definition “game design technics”, in meaning that designed elements systematically, thoughtfully, artificially for the purpose to retain audience. Further, the “non-game contexts” is anything, where your objective is outside of the game. (Werbach&Hunter 2012)

Karl M Kapp in his book "The Gamification of Learning and Instruction" combines different definitions of Gamification and define it as the using of game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. Further the author describes each element he used to define Gamification (Kapp 2012, 9-11).

"Game-Based" means that it is necessary to create a system in which players or content consumers accept certain rules when solving the proposed task using a given algorithm and see a certain quantitative result that feedback provides. This process should ideally cause a slight emotional strain that is discharged by a positive sense of satisfaction.

The "mechanics" of the game are set by creating a composition of different game elements, such as given conditions and a period to pass a level or complete a task, accrue points and grades, and receive feedback and a reward. To increase motivation, it is not enough just to use individual elements, but it is important to build a system where assessments and rewards would be adequate for the tasks.

In gamification, the components of "aesthetic" side and graphic design are in great importance. This greatly affects the consumer and his involvement. Unsuccessful color combinations, too small font, images used, and even the very arrangement of information blocks on the page can cause elementary fatigue and irritation, thereby nullifying all efforts to create the content itself.

"Game Thinking" are the ideas of competition, exploration, collaboration that can be used, thus turning the mechanical process into an emotional experience of rivalry and support, overcoming quests and enjoying the reward, combining storytelling and socialization.

"Engagement" provided by a successful combination of various elements of gamification ensures that a person is involved in the process based on enjoyment and has no fear of getting a bad grade, avoiding condemnation of the boss, although these incentives should not be underestimated. People's engagement is essentially the focus of Gamification. (Kapp 2012, 10-11)

It is necessary to balance the complexity of the task completing and rewarding, but also to ensure that the person is aware of the purpose of their actions and understands the meaning of each task.

Kapp considered that gamification generally promotes learning in the development of games, scientific data from the field of psychology and pedagogy are necessarily used. Experienced teachers and lecturers have been using various elements of gamification for years, the main of which are scoring systems, encouraging joint projects, and most importantly, what is expected from a teacher is receiving feedback in the form of comments on the work done. The gamification of education in the online space is, on the one hand, the optimization and expansion of the use of developments accumulated over the years of the development of pedagogy, but on the other hand, there is simplification and primitivizing that cannot replace the transfer of knowledge through personal communication.

At the same time, it cannot be denied that gamification has the potential to take learning motivation to a higher level by combining competition, socialization, and feedback. Overcoming the emerging difficulties in learning can be presented in the form of separate quests and their complexity can be adjusted depending on the need. Even the most complex problems can always be decomposed into simpler components and eliminated one by one. (Kapp 2012, 3-5)

Several features are mentioned by Ethan Mollick, professor at Pennsylvania University and expert in innovation and teaching, which are same for video games and gamification of e-learning in term of effectiveness: collecting the data of users' behavior give information for statistics and could be utilized for necessary modifications, using Clouds and mobile devices provide accessibility, potential of socialization promote networking, using the elements such as levels, badges and point improves the loyalty of users.

(Mollick&Edery 2008)

3.2 Elements of Gamification

Game methods have been used in teaching for a long time. Teachers, instructors use narratives to embed stories in the learning process in order to captivate the audience and engage emotions and experiences, specific tasks are created so that students can streamline their knowledge and experience, feedback is provided also in the form of information about the progress in learning. The variety of techniques used provide a comfortable environment for students to practice their skills. The aforementioned components can be categorized as “gamification elements” or “elements of gamification”. The classical trio of gamification “PBL” - points, badges, and leader board, are often mentioned in many studies about gamification, however mostly researchers urge to abandon such

a primitive and straightforward use of these elements at the same time, especially in learning and teaching process (Kapp 2012, 12).

In general, the specific game elements used in gamification can vary widely depending on the context and goals of the project. Some gamification projects may focus more heavily on social interaction and competition, while others may rely more on storytelling or immersive environments. The key is to select the right combination of game elements and mechanics that are most effective in achieving the desired outcomes (Torsten&Lincoln 2016). Karl M. Kapp applies that although points, badges, and leader boards are frequently employed in gamification, they should not be the primary focus of the strategy, as they represent only a subset of the potential techniques that can be utilized within a gamified system (Kapp 2012, 15-16). He offered a different look at the elements of gamification in terms of design.

The first element is the goal visualization. Learning goals are often presented as general statements, such as "understanding processes and phenomena" or "gaining knowledge". Unlike them, game goals are more specific and do not imply a broad interpretation: "pass the level" or "win the prize." Visual goal and scale of progress show how far you are, as well provide incentive, feedback, and an indication of progress (Kapp 2012, 28-29).

Secondly, Karl M. Kapp emphasizes the rules as participants' action regulations and a tool for learning process management. Operational Rules are the circumstances in which they play the game or use the training course. An instance of a gamification element is the imposition of a prerequisite condition that mandates the completion of intermediate tasks before allowing a learner to access the final examination. There are also could be behavioural rules, which mostly related to communication between participants and ethical issues (Kapp 2012, 29-30).

Further, the social elements of gamification are considered: competition, cooperation, and communication. Several elements of gamification are related to the social aspect, including leader boards, badges as visual representations of achievements, social sharing, which gives the learners opportunity to share their progress or achievements on social media, collaborative challenges, which allow learners to work together towards a common goal, and at least social feedback, which provides learners with feedback from their peers or other members of the community. This can help to make a sense of social connection as learners receive feedback and support from mates. Thus, the social elements of gamification can help to create a more engaging and interactive learning

experience, which can increase motivation, satisfaction, and overall learning outcomes (Kapp 2012, 31-32).

Other significant elements that could impact motivation are time limiting, levels of achievement, storytelling and hero journey, curve of interest, aesthetic solution and possibility to re-play or repeat the process. (Kapp 2012, 32-43)

3.3 Gamification of online courses

Gamification is used in education as a developing strategy for improving students' engagement. The motivation could be stimulated by applying game design components in educational environments (Dichev&Dicheva 2017).

Gamification's popularity has grown during the last decade due to a common assumption that it could positively impact behavioural changes, foster retention, promote constructive competition and social interaction between learners in wide context (Dominguez&Navarette 2013).

Harsha Gangadharbatla and Donna Z. Davis found that gamification in education is more focused on improving course completion rates and increasing student engagement in the learning process, rather than intended to deliver knowledge, ensure understanding of learning materials, and skill development per se (Gangadharbatla&Davis 2023).

The main drawback of online learning is the lack of motivation and low level of completion of training. The completion rates of online courses can vary widely depending on the course, the platform, and the location of the learners. According to a report by Class Central, a search engine and review site for online courses, the average completion rate for MOOCs (Massive Open Online Courses) is around 15% (Jordan 2014).

Game elements right combination could increase learner engagement and motivation, as learners are incentivized to complete tasks and progress through the learning experience. Very important advantage of gamification is providing learners with immediate feedback on their progress, which helps to reinforce learning and identify areas that need improvement. Learners are encouraged actively participate in the learning process, rather than passively consuming content. The use of

certain game elements gives a sense of accomplishment and achievement as they progress through the learning experience, which can further motivate them to continue learning (Kapp 2012, 26-29).

There are several factors that can make it difficult to gamify an online course effectively. That could be a lack of clear learning objectives: gamification should be used to enhance learning and reinforce specific learning objectives. Without clear learning objectives, it can be difficult to integrate gamification elements in a meaningful way. Sometimes inappropriate game mechanics used in the gamification of online courses are chosen and it make gamification ineffective. Game mechanics always should be relevant with the learning context and the target audience. Plentiful feedback is essential for success: it is an important component of gamification, as learners need to know how they are progressing and what they need to improve. Insufficient feedback can lead to disengagement and decreased motivation (Kapp 2012, 26-29). Over-reliance on game mechanics also could harm the convincingness of the training. While game mechanics can be effective in motivating learners, relying too heavily on them can lead to a dramatically shallow learning experience. It's important to strike a balance between game elements using, target audience needs, and actual learning content. At least, some gamification elements may require technical expertise or specialized software, which can be challenging for instructors and learners to navigate. This can be a barrier to effective gamification of online course. (Sailer&Hence 2017)

3.4 Benefits and drawback of gamification

Gamification has the potential to enhance student motivation and interest in the course by making it more interactive and engaging. When students are interested in the course, they have a better chance of remembering what they are learning. (Hamari&Koivisto 2014). Mekler and Brühlmann claim gamification encourages learners to participate in the course more actively, which can lead to a more interactive and collaborative learning environment. Game elements' using in trainings and educational online courses provides learners with immediate feedback, which may help them in remaining motivated and focused on their educational objectives. (Mekler& Brühlmann 2017). Thus, gamification can make the learning experience more enjoyable and less intimidating, which can help learners to overcome any anxiety they may have about the course (Mekler& Brühlmann 2017).

However, there is a downside and some weak points in gamification implementing into learning process. Students may focus more on earning points and badges than actually learning the material if the game elements are overemphasized. (Kapp 2012, 16). According to Dichev and Dicheva, sometimes the game elements are not appropriate to the learning objectives, thus, learners may not see the value in them and may become disengaged (Dichev&Dicheva 2017). Gamification may not be effective for all types of learners or for all types of material. Some learners may find the game elements distracting, while others may not respond well (Dichev&Dicheva 2017). Also, developing and implementing gamification elements may require additional resources and expertise (Koivisto, 2014). At least, the novelty of game elements may wear off over time, and learners may become bored or disengaged if the elements are not updated regularly (Dichev&Dicheva 2017).

4 RESEARCH METHODS

4.1 Research Methods consideration

By itself, the process of gamification of online courses does not seem to be complicated in meaning to choose and add some alliable elements, but due to the fact how many difficult-to-determine factors can influence the result, the gamification can easily turn out to be ineffective. To achieve the best result, it is necessary to determine the initial goals of creating this training course, as well as what factors influence motivation of learners, considering the specifics of online learning.

Thus, the result of this study can be approximate information about who makes up the audience of "Investment Readiness", what impacts their motivation and which gamification elements can influence this motivation. Bearing in mind the complexity of the phenomena of online learning and gamification, on the one hand, and the narrowness of the task of identifying the optimal solution for a specific training course for a determined audience, the expert interviews assumed to be the most appropriate form of research.

4.2 The objective for using qualitative research and in-depth interview

According to Creswell, qualitative research is typically used in situations, for example, exploring new or complex phenomena, where little is known about the topic. It provides more profound comprehension of the topic by collecting rich and detailed data (Creswell 2014). As well this type of research could be used to understand things from the perspective of people's experience. In the article of Braun and Clarke noticed that that it enables researchers to investigate the significance and meaning people tailor to their experiences and to understand the factors that shape their behavior (Braun&Clarke 2019). Besides this, qualitative research is often used to investigate sensitive topics such as health issues, drug use, and sexual behavior. Marshall and Rossman in their paper "Designing Qualitative Research" mentioned that it allows participants "to express their views in a safe and non-judgmental environment" (Marshall&Rossman 2014).

Thus, qualitative research is used when a deep and detailed understanding of a research question or phenomenon is required, and when statistical analysis alone may not provide a complete

picture. To obtain the most detailed information on the research problem, interviews with experts were conducted.

Expert or in-depth interview is a commonly used technique within the ambit of qualitative research. This method involves engaging with individuals who possess specialized knowledge and experience, with the objective of gaining insights and perspectives on a particular phenomenon or research question. Semi-structured or unstructured manners are used for conducting an in-depth interview, as it allows for more flexible dialogue between the interviewer and the interviewee: the respondent can express more detailed information for research and even open up new perspectives for understanding the topic. The quantitative approach, which is based on the analysis of numerical data, does not provide such an opportunity. Marshall and Rossman state that in-depth interviews are useful in circumstances where the aim is to delve deeply into the subjective experiences, attitudes, and perceptions of individuals groups, as well as to uncover complex or nuanced phenomena that are difficult to capture through quantitative methods alone (Marshall&Rossman 2014).

4.3 Quantitative data using for research

Quantitative and statistical data analysis is a tool for generating empirical evidence that can inform decision-making in a wide range of contexts. According to Creswell, while qualitative research typically includes gathering and investigating non-numerical data, such as interviews, observations, and written documents, there are some instances where quantitative data can be useful in qualitative research (Creswell 2014). As Braun mentioned, while conducting a qualitative study there is the possibility to use quantitative data provided by web-site analytics such as traffic data, user behaviour, conversion rates, and other engagement metrics to provide the qualitative findings with support and context (Braun&Clarke 2019). Thus, the website analytics can give valuable insights into how a website's users interact with it and how it can be optimized to make the user experience better for achieving the business goals.

A more detailed description was provided by Avinash Kaushik in his book "Web Analytic 2.0". Traffic data includes information about the number of visitors to the website, the source of the traffic, for example search engines, social media, direct traffic, as well as the geographical location of the visitors (Kaushik 2010). User behaviour possible to analyse using the data about visitors' navigation on the website, what pages they visit, how long they spend on each page, and where they exit the

website. Conversion rates give information about amount of visitors who take a desired action on the webpage, for instance - made a purchase or filled out a contact form. Engagement metrics includes data on how users engage with the content on the website, such as how often they share content on social media or leave comments on blog posts. Also, device and browser data could be analysed: this includes information about the devices and browsers that visitors use to access the website. At least, search engine data, what includes information on the search terms that visitors use to find the website, as well as how the website ranks for those search terms. (Kaushik 2010)

Website analytics data can be used to provide context and support for qualitative findings, identifying user behaviour patterns and understanding user preferences and interests. Gathered by web-site analytic data helps to explore user experiences and identify areas where users might be encountering difficulties. For example, Kaushik mentioned, that a researcher might use website analytics data to identify pages where users spend a lot of time or where they close the website (Kaushik 2010).

Thus, in qualitative research, it is possible to use website analytics data as a valuable source of information: for example, to obtain information about user behaviour during the website visiting. However, in this case web analytics data is employed in conjunction with other qualitative research methods such as interviews or observation. In this combination, a more complete picture of the user experience will be obtained. Quantitative data should support and complement the results of qualitative research.

5 EMPIRICAL DATA PROCESSES

The basic theoretical aspects of gamification and motivation in online learning were discussed earlier in the third chapter. This chapter will present an analysis of the collected interview data, as well the circumstances for introducing elements of gamification into the structure of online course.

At the first stage of the study the annual analytical data of the "Readiness for Investment" course were considered, and specifically the user attendance scales, the ratio of the percentage of people who completed the course partly or in full - as initial information. Then, at the second stage, an analysis of the online interview was carried out, for which the thematic codification method was applied.

5.1 Investment Readiness features

"Investment Readiness" has some common characteristics with MOOC conception and corporate training. Massive open online courses (MOOCs) are online educational programs that are designed to be accessible to a large number of students from around the world. MOOCs are usually free or available at a low cost, and they are designed to be flexible so that students can take the course at their own pace (Jordan 2014). Corporate training, on the other hand, is a type of education and training program that is designed satisfy the specific needs of a company or organization. Corporate training is usually delivered through in-person workshops, online webinars, or customized e-learning platforms (Bacsich 2019). Thus, the corporate training is designed for employees of a specific company or organization while MOOCs are open to anyone who has an access to internet connection. Investment readiness course was created for the specific need of organization, that characterize it as corporate training.

The goal is as mentioned above to address specific business needs and objectives; however, it provides quite general information and skill development as well as MOOC. MOOCs are typically delivered online through platforms like Coursera or edX, while corporate training may be delivered in person or through customized e-learning platforms, thus, "Investment Readiness" complies again with corporate training. Considering the cost, the similarity with corporate training appears: if MOOCs are often low cost or free of charge, while corporate training is typically a company expense that involve significant costs for organization, for instance, using "Howspace" platform (Jordan 2014).

In summary, "Investment Readiness" online course is identified as an asynchronous online course that has the hallmarks of corporate training.

5.2 Statistic data analysis

It is important to provide statistical information when examining data related to traffic and user engagement to ensure a relevant result. There are two visual representations of the statistics: Chart 5.2.1 Invest Ready Visitor Activity in 2022 and Chart 5.2.2 Percentage of Most Viewed Topics

The graphical representation provided in the form of a line graph in diagram 5.2.1. depicts the estimated activity at the course over a span of 11 months in 2022. There are three key indicators captured in the graph, which include the number of visitors, active users, and commentaries. It can be concluded after considering the data that the highest figures are related to the number of visitors generally, which remained relatively stable from January to May, and then increased sharply, peaking at over 600 visitors on May 19th. The suggestion about peaks is that in these time periods there were business events organized by company, where the business incubator website was presented. However, the lowest point of visitors was at the end of July, summer holidays period, after which the number of visitors remained stable at around 100 people.

In relation to the number of active users, it is noteworthy that the indicator remained significantly low throughout the analysed period and never surpassed a peak of 100. Similarly, the indicator for commentaries remained consistently low and stable.

Attendance analytics provides evidence that the course itself generates active interest among users, which is clearly seen in diagram 5.2.1. During 2022 there is a relatively stable and high number of visits. At the same time, the number of active users, that is, those who viewed more than one lesson, is quite low for the analysed period. Considering the graph of comments remained even lower, thus the course content did not generate any attempts to discuss the content, ask questions, and express an opinion. From all this data, we can conclude that the initial interest of visitors was not satisfied and faded away. In summary, it can be stated with certainty that the course was able to generate interest and attract visitors, but despite this, users were not sufficiently motivated to actively participate or discuss.

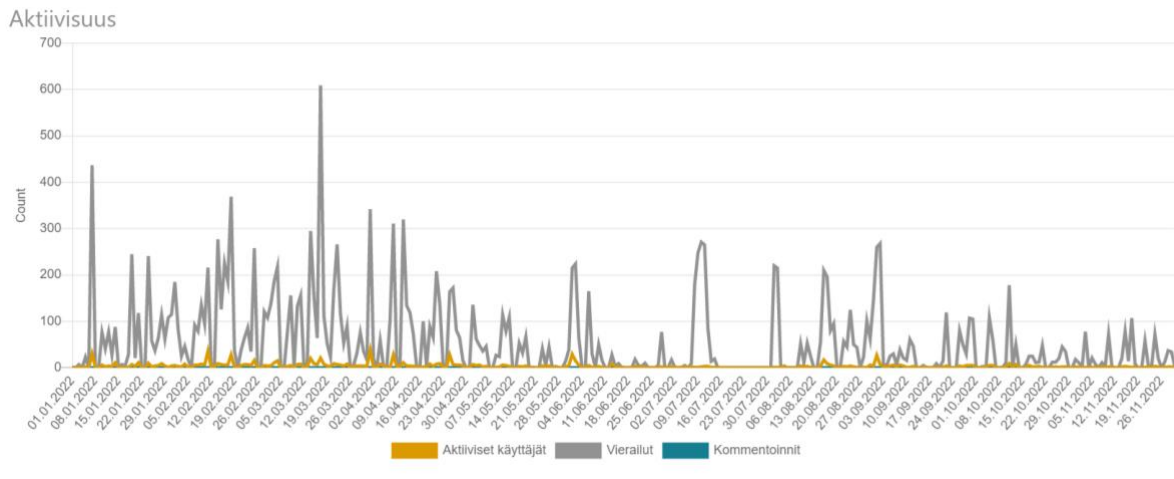


Chart 5.2.1 Activity of “Investment Readiness” Visitors in 2022

To assess the users' engagement, it is useful to identify what kind of content was most in demand: which course lessons users attended more often than others and what kind of information, in their opinion, is of value. Graph 5.2.2 shows which of the topics offered in the course were more popular and aroused the interest of the target audience.

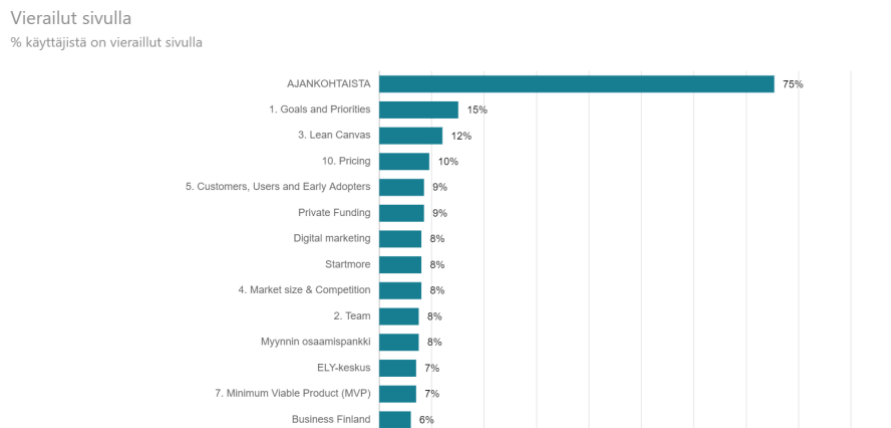


Chart 5.2.2 Percentage of the most viewed topics

According to the data, 75% of users attended the introductory part of the course, which confirms the high level of interest in the main topic of the course - readiness for investments. Further, 15% of users completed the first lesson "Goals and Priorities", which also indicates an interest in understanding the main objectives of the course. In addition, from the data obtained, there are some topics which are more in demand, such as "Lean Canvas" and the tenth lesson "Prices". Thus, it is noticeable that users do not attend lessons in sequential order but choose from such topics that are most relevant for their business. This data can be interpreted as a very conscious

approach to the study of course materials and the obvious benefits of the information provided for entrepreneurs. In general, analysing the graph, it can be argued that, despite the fact that the percentage of user involvement varies significantly, nevertheless, all topics of the course aroused some interest among users. Information about the relative level of user engagement can be used to modify course content and design in the future.

Based on information about which topics are the most popular and interesting for users, it is possible to modify this course and create new, more effective training programs that will meet the needs and preferences of users to the maximum extent. That is why it is necessary to continue collecting user engagement data for further analysis and improvement of online learning outcomes.

5.3 Analysis of qualitative data

5.3.1 In-depth Interview. Groups of respondents

In this study, the participants were divided into two groups, namely Respondents 1 and Respondents 2, for the purpose of collecting and analysing data. The participants in Respondents 1 group are business consultants working in the case company, and they potentially serve as intermediaries who recommend the "Investment Readiness" course to end consumers. The in-depth interviews with these participants were conducted with the objective of gathering information about the intended goals and objectives of the online course, as well as identifying the characteristics of the target audience. In succession, respondents of second group are the practising teachers at online schools. The aim of their participation in the study is provide the insight into the issues of students' motivation and teachers' opinion about potential solutions for optimizing the learning process. Another useful information collected was the respondents' experience using gamification elements and practise in the learning process and their opinion about gamification's impact to engagement and motivation of students.

Necessary to emphasize, that the respondents for interviews were selected taking in account their professional experience, as well as their existing or potential intermediaries' opportunity, being business advisors to entrepreneurs, who use the "Investment Readiness" course in their daily work.

5.3.2 Interview questions

It was necessary to take into account the main purpose of the interview choosing the topics: to collect useful and relevant information for the planning gamification of online course, to determine the goals of Business Oulu creating "Investment Readiness", who are the target customers, their motivation factors in online learning, as well as possible ways to overcome the lack of motivation. The first set of questions (Appendix 1) related to gamification aims to explore the potential benefits of gamification for online learning and how it can be used to improve the learning process. The questions also seek to understand whether gamification can effectively encourage audience engagement, collaboration, and teamwork in online learning programs. Additionally, the questions delve into the role of rewards and recognition in a gamified online learning experience and the types of rewards that may be most motivating for business professionals.

The second set of (Appendix 2) questions aim to gather information about the goals of the organization and the target audience of the "Investment Readiness" online course. These questions help to understand what characteristics the target audience has and draw conclusions about possible ways to optimize and gamify the online course based on the information received. They also examine the importance of ongoing learning and professional development to the long-term goals of the target audience. Furthermore, the questions delve into the challenges related to time management and balancing work and personal obligations with learning.

The need to identify specific areas of knowledge for successful business scaling and the search for investors was taken into account formulating questions. An important topic for interviews is the definition of goals and outcomes that clients seek to achieve by completing an online course. In addition, useful information can be obtained by discussing the personal experience of respondents both in online learning and in interaction with entrepreneurs. To get the clearest information that could be used planning gamification, it is necessary to separate the goals of the company and the goals of customers, technical limitations from design and structural drawbacks of the course lessons in questions of the interview.

In general, the interview questions are designed in such a way as to collect the most versatile information that determines the successful gamification of an online course. By exploring these topics, the interview seeks to inform the design and development of effective online courses and contribute to the broader discourse on improving the online learning experience.

5.4 Content analysis of interviews

The interviewees wished to remain anonymous. Interview questions are provided in the Appendix. The interview was recorded in an audio file, which was destroyed after the transcription was made. To work with the transcription text, thematic codes and subcodes were used, the codes and their explanation will be given in Tables 5.1 and 5.2 in the part 5.4.1. For visualization, each code and subcode was assigned a different colour, and thus the phrases of the respondents related to a particular topic were highlighted in the text of the interview. By analysing the words and phrases used, it is possible to obtain information and draw conclusions within the framework of relevant research topics.

5.4.1 Codification of qualitative data

The codification of data gathered through the process of interviewing is considered to be a critical step in the data analysis process. It allows to organize and make sense of large amounts of qualitative data. Qualitative data is typically unstructured and can be difficult to analyse without sort of system for organizing and categorizing it. Codification makes the data more manageable, identify patterns, themes, and relationships that may be hidden within the data (Braun, 2019). Thus, codification of qualitative data helps to increase the reliability and validity of the analysis process.

There are several thematical codes and sub-codes in the Tables 5.1 which were utilized analysing the first group of the respondents: "Goals", "Problems", "Conditions", "Target customer", "Using conditions" "Resources", "Opportunities", "Elements". The implementation of the codifications will facilitate the structuring of the interview transcripts to identify pertinent information, which can subsequently be utilized for analysis in future research. The table also contains examples of words and phrases from the interview text on the relevant topics.

Name of Code	Meaning of Code	Example of Code
"Goals"	Describe the goals of the company creating and	"to create the scalability of your business", "guide to

	implementing “Investment Readiness” online course.	users there to learn these materials”, “make sure you have your materials ready”
“Problems”	observe the problems and drawbacks of the course, as well as reasons of problems and consequences.	“low activities of participants”, “very “text - heavy”, “kill your motivation”, “not very attractive to receive information”
“Conditions”	clarify the limitations and circumstances, related to “Investment Readiness”.	
“Target customer”, the sub-code of “Conditions”	describes the target audience of “Investment Readiness”.	“entrepreneurs are very much diverge,” “situated in Oulu,” “company which searches for scale the business,” “people already interested about funding.”
“Limitation”, the sub-code of “Conditions”	related to the circumstances of using the course.	“licensing a certain amount of user accesses,” “training seminars before event,” “extra help with the teams.”
“Resources”, the sub-code of “Conditions”	are the technical, financial, human resources availability of using the course.	“There is big role of a coach,” “responsibility for moderation,” “leading Howspace”
“Opportunities”	explain possible ways to resolve the problems or improve situation.	“gamification is very motivating”, “full potential”
“Elements”, the sub-code under “Opportunities”	lists the gamification elements mentioned by the respondents.	“could be socializing elements”, “bar of your progressing,” “information how other “players” are doing,” “leaderboard could be more useful”.

“Other opportunities” , the sub-code under “Opportunities”	reflect all remaining mentioned ways to develop and progress the online course.	“scenario of the user journey,” “organize the event spare”, “would have a separate facilitator”
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Table 5.1 Codes for the First Group of Respondents

Other types of codes in the Table 5.2 were generated for exploring the information provided by the second group of the respondents: “E-learning” (has two sub-codes: “Pros of e-learning” and “Cons of e-learning”), “Motivation”, “Gamification”, “Circumstances” and “Opportunities”.

Name of Code	Meaning of Code	Example of Code
“E-learning”	Description of experience	“new opportunities appear”
“Pros of e-learning”, subcode of “E-learning”	Positive aspects of online education mentioned	learn from the best professors, study in the central universities, he easy access to the feedback
“Cons of e-learning”, subcode of “E-learning”	Negative aspects of online education mentioned	the fair and reaction of students, “lessons from mobile”, people were disappointed and irrigated, he doesn’t communicate with students
“Motivation”	Opinion about motivational issues	“pays attention to educational material,” “at home the environment is not very motivating”
“Gamification”,	Experience in gamification elements’ using for teaching	“Creates supportive environment,” “additional motivation,” “interactive notes,” “chat-bot,” “YouTube channel”, “creating “eco-system”, “it should be kind of algorithm.”

"Circumstances"	Online teaching and learning conditions	"Corporate education is "voluntary, but mandatory", "courses where people pay to get knowledge, "they have to put effort into the process"
"Opportunities".,	Opinion about developing ways	"Lifelong learning – this is a new reality," "new learning programs offer you new approaches," "it brings some advantages, some opportunities"

Table 5.2 Codes for the Second Group of Respondents

5.4.2 Analysis of qualitative data: First respondents' group

Based on the information that was received from the respondents of the first group, the creation of an online course is due to the general focus of the company: to help entrepreneurs prepare for scaling up their business, going beyond the Finnish market and searching for possible investors.

An important point in using the course is the desire of the client to take the business to the international level, which is why the course is provided in English. The following phrases were voiced as the goals of creating an online course: "operational tool; kind of organizational-operational things, check-up list, supportive tool, easy way to share materials". Thus, we can conclude that the training material is supposed to be used in various activities of the Business Oulu - from individual consultations to multi-level projects, which also include various trainings. Respondents reported that initially this training course was created within the framework of one of the projects initiated and funded by the EU for the development of entrepreneurship and innovation in Finland. The course was published on the Howspace platform. This platform is intended for corporate trainings leaded by a facilitator, but also provides opportunities for posting content and has a set of tools that can be used to implement users' interactivity - tests, polls, polls, reviews. Here it is necessary to note the first limitation for the gamification of the course, due to the limited set of tools on the Howspace platform.

Further, during the interview, shortcomings and problems in the use of the course were identified. Describing shortcomings, respondents used the phrases "text-heavy", "too much information", "no one going to read it", "people give up", "low activity of participants", "kill your motivation", "not very attractive." Indeed, at first the course lessons were a set of articles, videos and useful links united by a common theme, which the user had to scroll through manually, so the learning process was rather monotonous given that each lesson contained up to 20 articles and several videos. However, later the course was modified: separate videos were created with the main materials, the quality of video was at a very high level. Additionally, a forum was created for participants to ask questions and discuss the topics of the course. The second significant limitation of the online course can be noted here, that after the completion of the initial EU project, there were no human resources to moderate the site and maintain communication with users.

During the interview, the target audience of the online course was discussed. Three groups of entrepreneurs with different demographic, psychographic and behavioural characteristics were identified: first, they are entrepreneurs of established businesses who are looking for opportunities to scale and attract investment; secondly, these are start-up owners at the stage when they form a development strategy, bearing in mind the potential need for scaling in the future; The last group that might be interested and benefit from this course are aspiring entrepreneurs who are in the process of testing a business idea.

Based on information about the target audience, possible ways to increase and support the motivation of clients in studying course materials were considered. First, receiving feedback in any form was mentioned as a necessary condition for maintaining motivation; other opportunities were also discussed such as measuring and visualizing course progress, socializing features, and providing kind of rewards for those who successfully complete the course. The progress bar is very often used in online courses, visually represented as a line, pie or percentage indicator. According to the respondents, this can be an effective way to motivate learners to complete the "Investment Readiness" course, but it requires additional resources, since Howspace platform does not provide tools for implementing such a scale and additional efforts must be made by creating this function using other software. As mentioned above, the course originally had a forum for discussion, but was later removed due to the lack or very limited ability to moderate and administer the site. This factor continues to play a role, although there has been discussion about reopening the discussion if the course is used in other projects where participants can interact and ask questions.

Respondents were sceptical about the idea of encouraging those who completed all levels of the course with some kind of reward, as they believed this could negatively affect participants' intrinsic motivation. However, the possibilities of sending a congratulatory virtual flyer with the name of the client and logo of Business Oulu, which can be published on social networks, as well as a personal invitation to the next event organized by the company on the calendar, were discussed.

More than other possibilities, various forms of feedback to increase motivation were discussed. According to the interviewees, the best option is to use the platform tools as elements of gamification to create interactive customer interaction during the lesson - polls, tests, voting and assignments to submit. Thus, by answering questions and completing tasks, the student can understand that the learning material has been learned successfully and get satisfaction when the lesson is completed.

By analysing the results of the interviews of the first group generally it is possible to see how online learning is used to support entrepreneurship and innovation, especially for start-ups, medium and small businesses. It is necessary to emphasize the importance of introducing the latest technologies in the process of disseminating useful information among entrepreneurs.

5.4.3 Analysis of qualitative data: Second respondents' group

The interviews with the second respondents' group seek to explore the issues connected with motivation of students, provide insights into the advantages and limitations of online learning in relation to traditional education and test the respondents' opinion about using gamification elements in online education. The interviewees used to work as pedagogues in a school for several years and are currently teaching online. One of the respondents have experience in creating courses and training programs for employees in different companies.

The main topics that were supposed to be discussed were questions about the motivation of students in online education and a discussion of personal experience in using gamification elements in e-learning. The interview begins with a discussion of the prevalence of the online environment in our lives and its impact on education. The next point is not related to gamification, but it was very interesting to note that although the use of the Internet has created new opportunities

for learning, many forced users during the COVID-19 pandemic spoke strongly negatively about their experience of participating in online classes and expressed concerns about the ability of online learning to replace traditional education. The respondent recalls emotional discussions between teachers and parents during lockdown.

While discussing online education in general, interviewees named its advantages, such as flexibility and accessibility in terms of time and place, a modern approach using electronic gadgets and the ability to quickly adapt to external changes. The phrases "new opportunities, learning from the best professors, studying in foreign universities, use the informational and cultural resources from the Mega polices" were used. On the other hand, also the limited possibility of influence and control on the part of the teacher were identified as the main disadvantages of e-learning. In addition, difficulties were noted in the technical side of the e-learning process, mainly associated with sudden interruptions in the Internet connection and poor quality of audio-visual communication. The following phrases describe dissatisfaction in the process of online learning: "it is impossible to control the process completely, speak "at you", not "with you", online education is only "normal school" poor substitute, lower attendance, insufficient preparation, constant interference, poor quality of sound." In general, comparing their experience of teaching in a traditional educational institution and in an online school, the respondents expressed the opinion that the current education system is conservative and responds too slowly to modern challenges. They suggest that the development of new technologies and other external factors such as pandemics and war show the need for a more proactive and adaptive approach to education. They noted that a combination of online classes and a traditional approach is most preferable.

In the interviewees' opinion, using elements of gamification in online learning can have a positive impact on the motivation of students. They mentioned "interactive notes, chat-bot which remind about tasks and deadlines, video in YouTube, slides with playful illustrations, storytelling," as the elements they could use for making the teaching process more attractive. One of the respondents drew the attention to fact that gamification does not greatly affect the quality of learning in terms of the content of the course, but by making the learning process more fun, it contributes to the involvement of students. Another respondent noted that elements of gamification bring diversity to the lesson, so the learning topic can be worked out more intensively using different types of tasks and tools. Generally, the respondents of the second group consider the possibilities of gamification mainly as one of the ways to keep students' attention and diversify the learning process. Talking about gamification, they use phrases such as " as entertainment; a lesson can be more interesting;

a way to diversify tasks." The socialization opportunities, competitions and rewards are not considered as very effective tools for increasing motivation.

6 CONCLUSION

This study aimed to investigate the effectiveness of incorporating gamification elements in “Investment Readiness” in retaining interest and attention of the target audience in the online course. The results indicate that incorporating more interactive elements could enhance user engagement and participation.

There was used a mixed-methods approach to gather data in the present study. It includes quantitative data analysis and qualitative interviews' analysis. The use of multiple sources of data enhances the reliability and validity of the study, as it allows for a more comprehensive understanding of the impact of gamification elements in online courses. In addition, the present study emphasizes the importance of a more adaptive and more active approach to respond to modern challenges, including new technologies and creating more engaging and effective learning experiences could benefit online education settings. The findings show that the education system should be more flexible and agile because of the fast-changing circumstances and that there is a necessity to implement new technologies to improve learning.

It is essential to gather follow-up data and relevant metrics to determine the overall impact of the intervention to ensure the effectiveness of gamification elements in the long term. To identify and measure other aspects of gamification in online learning, for example, the impact on knowledge retaining or the effectiveness of gamification in different contexts or disciplines, there could be provided further insight into the benefits and limitations of incorporating gamification elements in online courses.

On the whole, this study offers valuable insights into how gamification elements can be utilized to improve user engagement and participation in online courses. It is necessary to explore other sides of gamification in online learning and to find out the limitations of present study in further research. The study did not capture the long-term effects of these elements despite the fact that study has some limitations because implantation of gamification elements was in its early stages. Therefore, further research is necessary to confirm the effectiveness of gamification in enhancing online learning outcomes and to explore the potential benefits and drawbacks of different gamification strategies.

7 REFERENCES

Ally, M., Prieto-Blázquez, J. 2014. What is the future of mobile learning in education? *International Journal of Educational Technology in Higher Education*. 2014, Vol. 11, 1.

Arbaugh, J. B. 2014. A decade of research in online learning: Key findings and implications. *The Internet and Higher Education*. 2014, Vol. 20.

Arkorful, Valentina. 2014. The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Education and Research*. 2014, Vol. 2, 12.

Bacsich, Paul. 2019. *Online Education Today*. Online Learning. 2019.

Baker, R. S., & Siemens, G. , in K. Sawyer (Ed.). 2014. Educational data mining and learning analytics. *The Cambridge Handbook of the Learning Sciences*. 2014.

Christo Dichev, Darina Dicheva. 2017. Gamifying education: what is known, what is believed and what remains uncertain. *International Journal of Educational Technology in Higher Education*. 2017, Vol. 14, art 9.

Clark, R. C., & Mayer, R. E. 2016. *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning* . San Francisco, CA : Wiley, 2016.

Cross J. 2004. An Informal History of E-learning. *On The Horizon*, Volume 12, Number 3, pp. 103-110. Emerald Group Publishing Limited 2004

Coursera 2022. coursera.org <https://about.coursera.org/press/wp-content/uploads/2021/11/2021-Coursera-Impact-Report.pdf> Search date 12.01.2023

Creswell, J.W. 2014. *Research design: Qualitative, Quantitative and Mixed Design Approaches*. London : Sage Publication, 2014. pp. 78-90.

Dan Hunter, Kevin Werbach. 2012. *For the Win: How Game Thinking Can Revolutionize Your Business*. Philadelphia : Wharton Digital Press , 2012.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. 2015. From game design elements to gamefulness: Defining "gamification". *Human-Computer Interaction*. 12 2015, Vol. 3, 4, pp. 294-335.

Dichev, C., & Dicheva, D. 2017. Gamifying education: what is known, what is believed and what remains uncertain: a critical review. *International Journal of Educational Technology in Higher Education*. 2017, Vol. 14, 1.

Dominguez A., Saenz-de-Navarrete J., de-Marcos L., Fernández-Sanz L., Pagés C., Martínez-Herráiz J. 2013. Gamifying learning experiences: Practical implications and outcomes. *Computers & Education*. 2013, Vol. 63.

Eurostat 2022. products-eurostat-news. ec.europa.eu. Search date 24.01.2023. <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20220124-1>.

Explodingtopics. 2021. elearning-market-stats. explodingtopics.com. Search date 03.05.2023. <https://explodingtopics.com/blog/elearning-statistics#elearning-market-stats>.

Graham, C. R. (pp. 3–21). : . 2006. Blended learning systems: Definition, current trends and future directions. [book auth.] C. J. Bonk & C. R. Graham. *The handbook of blended learning: Global perspectives, local designs*. San Francisco : Pfeiffer, 2006.

Hamari, J., Koivisto, J., & Sarsa, H. 2014. Does gamification work? - A literature review of empirical studies on gamification. In *Proceedings of the Annual Hawaii International Conference on System Sciences*. 2014.

Harsha Gangadharbatla, Donna Z. Davis. 2023. *Emerging Research and Trends in Gamification*. Information Science Reference. 2023.

Hrastinski, Stefan. 2007. The Potential of Synchronous Communication to Enhance Participation in Online Discussions. *28th International Conference on Information Systems*. 2007.

Huotari, K., & Hamari, J. 2012. Defining gamification: A service marketing perspective. Conference: 16th International Academic Mindtrek Conference. 2012.

Jordan, K. 2014. Massive open online course (MOOC) completion rates revisited: Assessment, length and attrition. *The International Review of Research in Open and Distributed Learning*. 2014, Vol. 15, 5.

Kapp, K. M. 2012. *The gamification of learning and instruction: game-based methods and strategies for training and education*. San-Francisco, CA : John Wiley & Sons, 2012.

Kaushik A. 2010. www.kaushik.net. Search date: 12.03.2023. <https://www.kaushik.net/avinash/web-analytics-101-definitions-goals-metrics-kpis-dimensions-targets/>.

Kaushik, Avunash. 2010. *Web Analytics 2.0 The Art of Online Accountability & Science of Customer Centricity*. Indiana : Wiley Publishing, Inc, 2010. pp. 35-75.

Kentnor, H. 2015. Distance education and the evolution of online learning in the United States. *Curriculum and Teaching Dialogue*. 2015, Vol. 17.

Koedinger, K. R., & Corbett, A. T. 2006. Cognitive tutors: Technology bringing learning science to the classroom. *The Cambridge Handbook of the Learning Sciences*. 2006, pp. 61-78.

Koivisto, J., & Hamari, J. 2014. Demographic differences in perceived benefits from gamification. *Computers in Human Behavior*, 35, 179-188. 2014, Vol. 35, pp. 179-188.

Marshall, C., & Rossman, G. B. 2014. *Designing qualitative research*. London : Sage Publication Inc, 2014.

Mollick E., Edery D., 2008. *Changing the Game: How Video Games Are Transforming the Future of Business*. London : Pearson, 2008.

Park, Y. 2007. A pedagogical framework for mobile learning: Categorizing educational applications of mobile technologies into four types. The International Review of Research in Open and Distributed Learning. 2007, Vol. 8, 2.

Polaris. 2022. e-learning-market. www.polarismarketresearch.com. Search date 06.05.2023. <https://www.polarismarketresearch.com/industry-analysis/e-learning-market>.

Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. 2017. How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. Computers in Human Behavior. 2017, Vol. 69.

Shand, Kristen. 2015. The Art of Blending: Benefits and Challenges of a Blended Course for Preservice Teachers. Journal of Educators Online. 2015.

Sedivy-Benton Amy L., Andrew Hunt, Teri L. Hunt, James M. Fetterly, Betty K. Wood. 2014. Emergence of Successful Online Courses. A Student and Faculty Shift. 2014.

Statista 2022. www.statista.com. <https://www.statista.com/outlook/dmo/eservices/online-education/worldwide#global-comparison>. Search date 16.01.2023.

Technavio 2022. Technavio.org. Search date 04 12 2022. <https://analysis.technavio.org/e-learning-industry-analysis-research>

Torsten Reiners, Lincoln Wood C. 2016. Gamification in Education and Business. New-York : Springer Cham, 2016.

WorldEconomicReport 2020. Search date 29.03.2023. www.weforum.org. <https://www.weforum.org/reports/the-future-of-jobs-report-2020>

8 APPENDICES

Appendix 1. The first set of questions related to gamification of online course:

- What do you think are gamification's benefits for online learning?
- How do you think gamification could be used to improve learning process?
- Do you think gamification could be an effective tool for encouraging audience engagement and participation in online learning programs? Why or why not?
- How do you think gamification can be used to encourage collaboration and teamwork among learners in an online course?
- How important is the use of rewards and recognition in a gamified online learning experience, and what types of rewards do you think would be most motivating for business professionals?
- What other features or elements do you think are important for a gamified online course aimed at business professionals, such as leaderboards, social sharing, or progress tracking?

Appendix 2. The second set of questions related to goals of organization and target audience of "Investment Readiness" online course

- How can we define the target audience for IR?
- What level of education do they usually hold when they came for your service?
- How important is professional development and ongoing learning to their long-term goals?

- How comfortable are you with using technology and online platforms for learning, and what specific features or functionalities do you find most useful?
- What are the biggest challenges in terms of time management and balancing work and personal obligations with learning?
- What specific skills or knowledge areas do you feel are most important for success scaling the business and looking for investors?
- How important is collaboration and networking with other professionals in your industry?
- What specific outcomes or goals your customers hope to achieve by completing the online course, and how do you plan to measure your success in achieving these outcomes?