UNIVERSITY OF TARTU DEPARTMENT OF ENGLISH STUDIES

GAMIFICATION IN EDUCATION: GAME DESIGN ELEMENTS IN THE SOLUTIONS SECOND EDITION EFL TEXTBOOK SET MA thesis

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ABSTRACT

The students today are often referred to as 'digital natives' who have grown up in the digital age and as a result think and process information differently than the previous generations (Prensky 2001). Living in a digital age with digital natives, whose perception of learning differs from that of the generation(s) preceding them, it is the duty of educators to be receptive to new methodologies of learner engagement that might help to shape a learning environment better suited to the new type of learners (Dyer 2015:65). The need for a new approach to teaching and learning in general is stated also in the Estonian Lifelong Learning Strategy 2020, a document that guides the developments in education in Estonia in 2014-2020. Gamification, the use of game elements in non-game contexts (Deterding et al. 2011), is said to have great potential also in education as it helps to increase both user engagement and motivation Simões et al. (2013).

The aim of this thesis is to locate and analyse gamification elements in a textbook set used in Estonian schools and to see how the elements present exploit the potential of gamification in the context of language teaching. This would provide an idea of what the starting point would be in using gamification in English as a Foreign Language (EFL) lessons and what kind of support it could give for gamifying EFL classes. Knowing game elements would help teachers incorporate the elements into the methods they are already familiar with (Keramidas 2010).

The thesis consists of an introduction, two core chapters and a conclusion. The introduction explains the reasons for addressing the topic, states the research questions and introduces the structure of the paper. The first chapter presents the definition of gamification, provides examples of gamified systems, discusses criticism towards gamification and the following response, and introduces different gamification taxonomies. It also includes the list of game elements used in the analysis conducted in the second chapter. The list of game elements is compiled based on game element taxonomies suggested by Cugelman (2013), Blohm and Leimeister (2013 in Seaborn and Fels 2015:19), and Robson et al. (2015). The second chapter gives a short overview of the *Solutions Second Edition* textbook set, introduces the game elements found in different parts of the set, and discusses the gamification potential of the set. The conclusion provides a summary of the findings.

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INTRODUCTION

Gee (2008:165) has stated in his collection of essays on video games, learning and literacy that schooling as we know it is an antiquated institution and present day schools are not fully adapted to the developed, fast-changing, high-tech, global world. Prensky (2001) claimed already more than ten years ago that the students of today are 'digital natives', who have spent their whole lives surrounded by and using different tools of the digital age and as a result think and process information differently than the 'digital immigrants' who were not born into the world of technology but have just 'learned the language'. Klopfer et al. (2009) suggest that many students in this new generation are using the new media and technologies to create and learn new things in new ways and to communicate in new ways. Merike Saar (2017) has, when discussing the characteristics of present day students, stated that we currently have a situation where it is common that a 21st century student, a 20th century teacher, and 19th century methods meet in our classrooms. All of these opinions draw attention to the fact that the needs of present day are often not matched with what is offered in schools.

The term digital natives is often used to refer to generations Y and Z as opposed to the digital immigrants from generation X and before. According to Saar's (2017) short summaries of the main characteristics of these three generations, generation X is independent, sceptical, and self-centered. They value education, are conscientious and willing to tolerate also unpleasant situations, ready to work years in the same place. They are hard-working and determined, tend to suppress their feelings, and often complain about the youth who want every task and duty to be a pleasant challenge (Saar 2017). Taruste (2017) has added that in Estonia generation X, born before the 1980s, is also loyal and conservative as dramatic changes took time during their formative years and they achieved success through hard work. Generation Y, those born in the period of 1980-1995, want to

do meaningful work that is in harmony with their values and provides opportunities for personal development. They need flexibility - the possibility to decide where and when they work (ibid.). They have grown up in the world of IT, the Internet is part of their everyday life, they use smart solutions and have versatile technology skills (Saar 2017). They are highly educated and take great interest in their health and environmental issues. However, they also have a shorter attention span, need prompt feedback and recognition. Generation Z is born around the turn of the century and into the world of Internet and social media (ibid.), making them even more native to the digital world than the generation preceding them. They are the generation of computer games who want also their work environment to be playful and gamified (Taruste 2017). Game elements such as competition, instant feedback, and prompt recognition help to alleviate their short attention span (Saar 2017). They seem to prefer project-based and informal learning, their priority is not to know the answer but to find it as quickly as possible (ibid.). Living in a digital age with digital natives, whose perception of learning differs from that of the generation(s) preceding them, it is the duty of educators to be receptive to new methodologies of learner engagement that might help to shape a learning environment better suited to the new type of learners (Dyer 2015:65).

The question of how to increase students' motivation and engagement has been discussed already before the differences between the digital natives and digital immigrants started to become more evident. Finding solutions that help to tackle that problem is especially crucial now when trying to bridge the gap between the school setting and the environment present day students spend their free time in. Although the dropout rate in Estonian schools has decreased in the past couple of years, the data presented by Praxis, an Estonian civil initiative non-profit think tank, shows that it is still high in all the levels of education (Haaristo 2015). Although it might be difficult for teachers to tackle the socio-

economic reasons behind students quitting school, they can and should try different approaches to increasing student motivation and engagement.

The need for a new approach to teaching and learning in general is stated also in the Estonian Lifelong Learning Strategy 2020 (hereinafter ELLS 2020), a document that guides the developments in education in Estonia in 2014-2020. Five strategic goals have been established to better achieve the general goal - to provide all people in Estonia with learning opportunities that are tailored to their needs and capabilities throughout their whole lifespan. Change in the approach to learning is one of the strategic goals. There are three main focus points: 1) a constructivist approach to learning where learning is individual, active, activity-based, and takes place in a specific context; 2) collaborative learning (where everyone is working together for a common goal); and 3) autonomy giving more freedom to decide and act to schools, teachers, and learners. Teachers are seen as integral parts in achieving the desired changes, as described on the Ministry of Education and Research's website on the change in the approach to learning. Changes are also proposed in how schools are run, what is taught, and what kind of learning environments are offered. The pedagogical beliefs and skill sets of teachers are considered vital in this, especially the use of a broad range of teaching strategies and the ability to see learners as partners in the learning process. Variety in the learning environment and study process is also considered important for raising and keeping the learner's interest. Therefore it seems that updating one's pedagogical toolkit with contemporary approaches not only helps to increase the motivation and interest of students but it is also necessary for contributing to achieving the broader goals agreed upon on the national level.

Kumar & Khurana (2012:46) believe that games are the first thing to be considered when innovative learning tools are discussed. Games are often believed not to involve any work and consist of only fun, but playing is actually said to be one of the hardest types of

work, during which seventy percent of all brain activity takes place (Wardaszko 2014 in Minkhov 2014). Games are also said to be the most exciting and motivating means that teachers can use to make the learning process more effective (Kumar & Khurana 2012). Gamers voluntarily invest hours of their time in developing their problem-solving skills when playing games (Gee 2008), but also developing personal qualities such as persistence, creativity, and resilience through hours of play (McGonigal 2011 in Lee & Hammer 2011).

Gamification, the use of game elements in non-game contexts (Deterding et al. 2011), tries to harness the motivational power of games and apply it to real-world problems such as, in the case of education, students' lack of motivation in school (Lee & Hammer 2011) or other similar problems. Dyer (2015:64) has noted that gamification is an emerging and rapidly growing trend. The history of gamification can be traced back to 2008, but it started to gain popularity around 2010 and is said to have become more widespread in the past years (Dyer 2015:49). Gamification has been applied in marketing, politics, health, education, etc. and is said to have caught the interest of researchers because of its potential, among other things, to facilitate mass-collaboration and knowledge contribution (Richter et al. 2015:21). Simões et al. (2013) have also advocated the use of gamification in education, saying that although the concept of has primarily been explored in marketing, it has great potential to be applied also in education as it helps to increase both user engagement and motivation.

According to Rock (2004 in Lee & Hammer 2011), disengagement from school often happens at the social and emotional levels, problems worsened by the formal rules of school. Gamification can change the formal rules often present at school, but it can also affect students' emotional experiences, their sense of identity and their social positioning - gamification projects offer the opportunity to experiment with rules, emotions, and social

roles (Lee & Hammer 2011). Seaborn and Fels (2015) argue that game elements can encourage behaviour change in the end-users (i.e. in school context the students), e.g. increase participation and improve student performance, by providing a user-centered approach that focuses more on the needs and desires of end-users in the design of systems. So it has been suggested that gamification has potential to make students feel more connected to and engaged in their learning.

Figueroa (2015) has discussed gamification in connection to second language acquisition (SLA) and agrees that also the field of second language learning and instruction has become more technology oriented and that a substantial number of second language (L2) learners are digital natives, in Prensky's terms, who process information differently from the previous generation. He also discusses the question of motivation and claims that out of different strategies, gamification is one that constantly promotes motivation, addressing both intrinsic and extrinsic motivation, both of which are necessary in L2 learning (Figueroa 2015: 33).

It has been emphasised by researchers that gamification is a not a panacea for student motivation and engagement problems but it definitely is a tool that can be of help in dealing with these problems. As Dyer (2015:65) has stated, "As learning professionals we owe it to ourselves and our emergent class of digital natives to be receptive to new methodologies of learner engagement while sticking to our philosophy of ensuring the robustness and validity of the desired learning outcomes." Bearing in mind its power to engage and motivate, gamification has good potential of being a useful tool for educators implementing a new approach to learning, especially considering that one of the main characteristics of generation Z is their fondness of gameful approaches.

Programmes that focus on different sections of the ELLS 2020 have been drafted and agreed upon for planning, funding, and implementing the measures and activities necessary

for achieving the objectives of the ELLS 2020. One of them, the General Education Programme 2017 - 2020, lists activities and focus points that should support attaining the objectives of the ELLS 2020 in general education. One of the subgoals is conducting learning activities with the aim of stimulating learners' interest in learning. The programme also suggests activities that, among other things, should assist in achieving the subgoals, and encouraging teachers to use the current study materials more effectively. Analysing study materials (e.g. coursebook sets) from the perspective of different approaches (e.g. from the perspective of applying gamification to English as a Foreign Language (EFL) lessons) can help to see the materials in a new light and provide ideas on how to use these in a more varied way, thus supporting their more effective use.

This thesis attempts to locate and analyse gamification elements in a coursebook set used in Estonian schools. Empirical research into the application of gamification has so far concentrated on its use in e.g. an online course, application, webpage (Seaborn and Fels 2015), and although it has been claimed that all tasks can be gamified, there has been little talk of using the game elements in non-digital situations. As the highest common denominator among the tools used by Estonian EFL teachers is very likely to be the coursebook, the author decided to examine whether, to what extent and in what form gamification is present in an EFL coursebook set used in Estonia. Being more aware of game elements and of how they are already present in the materials available for them in their lessons, teachers will hopefully be encouraged to apply more gamification elements more systematically to their lessons and eventually feel more confident about using gamification as a tool for increasing student motivation and for bringing variety to their lessons

The current thesis aims to answer the following research questions:

- 1) To what extent and how is gamification present in the *Solutions Second Edition* textbook set?
- 2) How do the elements present exploit the potential of gamification in the context of language teaching?

In order to answer the questions, the thesis will first discuss previous research on gamification in general, its applications in education, and also different game element frameworks suggested by researchers. It will then conduct an empirical analysis of the coursebook set *Solutions Second Edition* (intermediate level) by Tim Falla and Paul A. Davies (2012).

1 LITERATURE REVIEW OF GAMIFICATION

1.1 The definition of gamification

The most widespread definition of gamification was suggested by Deterding et al. in 2011 when they defined the concept as the use of game elements in non-game contexts. Although referred to by many researchers and widespread also in popular use, it is interpreted differently in different papers or studies. One of the critics of gamification, John Ferrara (2013:291), has objected to the use of this term, saying it has no formal definition. According to him, gamification can include anything from *FarmVille* to LinkedIn profile completeness bar, which makes it impossible for this term to make meaningful distinctions between meaningfully dissimilar things (ibid.). His claim is supported by the number of researchers who define gamification as suggested by Deterding et al. but then use this term to speak about the use of game elements, game-based learning, ready-made games, and simulations interchangeably. Seaborn and Fels (2015) also agree that no proper standard yet exists for this term but go on to state that the gamification is most commonly still defined as the use of game elements and mechanics in non-game contexts.

However, it is not enough for the elements to simply exist in a non-game context. Lee & Hammer (2011) have pointed out that school should be the ultimate gamified experience with the use of points that translate to 'badges' (grades), the use of rewarding system for desired behaviour and punishment system for undesirable behaviour, and 'levelling up' at the end of every academic year, if students have performed well. Yet, something about this environment fails to engage students. Thus, gamification does not mean simply the existence of some game elements in a non-game context, but the purposeful use and application of the (chosen) elements in that context.

In defining gamification for their study, Seaborn and Fels (2015:16) have also

discussed the development the term. Before the term was coined, many interrelated concepts were used to express notions similar to gamification such as funware, funology, ludic qualities (qualities of play), serious games, behavioural games, game layers, applied gaming, alternate reality games, games with a purpose, augmented reality games, etc. Deterding et al. (2011a in Seaborn and Fels 2015:16) felt that there is still a need for something else that would capture the new concept they were trying to define and explain and finally arrived at the term gamification. They suggest that it involves applying elements of gamefulness, gameful interaction, and gameful design with a specific intention in mind (ibid.). Gamefulness is said to refer to the lived experience, gameful interaction to the objects, tools and contexts that bring about the experience of gamefulness, and gameful design to creating a gameful experience (ibid.). What differentiates it from many other terms is that gamification does not require the end system to be a fully-fledged game (ibid.). Examples of the term will be provided later in the chapter.

According to the findings of Seaborn and Fels's survey of 2015 (2015:27), gamification differs from other similar concepts such as games with a purpose (GWAPs) and alternate reality games (ARGs) because of its two key ingredients: it is used for non-entertainment purposes, and it uses the elements that make up games without creating a fully-fledged game. Kim (2015:14) draws attention to the purpose of gamification which is to user engagement and problem solving. She states that the difference between games (including GWAPs and ARGs) and gamification is the nature of the problem it tries to solve – in order for something to be considered as gamification, its goal must be solving a real-world problem not a fictional one.

The current thesis follows the choice of Seaborn and Fels (2015:17) of using the distinction made by Deterding et al (2011a in Seaborn and Fels 2015:17) and sees gamification as the implementation of game elements in non-game contexts so that the

outcome is not a fully-fledged game. One of the reasons why this definition was chosen for this thesis is also its applicability in Estonian educational system. It has been claimed that getting a license [for a ready-made game] is like buying someone else's viewpoint, the whole content and the mechanics of the game from a context different from yours (Wardaszko 2014 in Minkhov 2014). Kapp (2012a in Dicheva et al. 2015:75) has explained that creating a highly engaging, full-blown instructional game is difficult, time consuming, costly, and it usually targets only one set of learning objectives chosen by the game designer. Dicheva et al. (2015:75) have added that in addition to that, the effective classroom adoption of educational games often requires specific technical infrastructure and appropriate pedagogical integration. Separate game elements, however, allow the user to pick and choose exactly those elements that are most suitable for the context/environment and participants, so that the set goals could be achieved as effectively as possible. According to Dicheva et al. (2015:75), the whole gamification approach suggests using game design elements and game thinking to improve learners' engagement and motivation as opposed to using or attempting to create elaborate games requiring a large amount of design and development effort. Keramidas (2010) supports this approach, saying that knowing game elements would help teachers incorporate the elements into the methods they are already familiar with. Thus it would seem that the gamification approach in the sense of applying game elements in non-game contexts would be the least demanding when it comes to specific resources (e.g. technology, funding) and at the same time would be flexible enough to suit the different needs of different teachers, students, and conditions.

1.2 Examples and empirical research

Although the term gamification is relatively new, the idea behind it is not novel. Morford et al. (2014:26) have claimed that the basic concept has been around much longer,

going back several decades. Dicheva et al. (2015:75) agree, saying that the military has, for example, long used badges and ranks in its activity and that also the leaders of the Soviet Union used some game elements in the early Soviet era as a substitute for money as an incentive for performing at work. Different customer loyalty cards, which have been around for quite a long time, are also an example of how gamification elements have been used in different non-game contexts. For example customers earn points every time shop and register their loyalty cards, based on the number of points they have they move between different levels and receive different customer statuses e.g. a gold status. There are also incentives for the customers to try to receive different levels e.g. higher levels give a greater discount, more money back, or provide other privileges not given to those on lower levels of customer status.

The results of a survey conducted by Seaborn and Fels (2015:27) on examples of gamification in published theoretical reviews and research papers show that among different domains the top fields for gamification research are education (26%), health and wellness (13%), online communities and social networks (13%), crowdsourcing (13%), and sustainability (10%). One of the fields to start incorporating game elements the earliest was marketing. In the case of marketing the aim of using gamification has mostly been to increase customer loyalty and to promote the service or product. Dicheva et al. (2015:75) have mentioned loyalty programmes such as frequent-flyer programmes, Foursquare, and Nike+. Robson et al. (2015:412) have also provided examples of how e.g. Samsung Nation and Pepsi Soundoff have used points, levels, or badges (in their online loyalty programmes) to deepen the relationship the customer has with these brands and how Microsoft gamified the process of translating Windows 7 operating system into different languages and adapting it to work in different situations.

In health and fitness the main goal of implementing gamification techniques has been to improve the health behaviour of people and to increase levels of activity and of individual fitness. Morford et al. (2014:31) have described some examples of gamification in regards to improving people's fitness. One such example is the Zombies, Run! application the aim of which is to increase the frequency the app's users run in the real world. The more the players run in the real world, the more supplies they can collect in the game and improve the living conditions of a virtual group of zombie-apocalypse survivors. The application also has a real-world event called The Zombie Run where people can participate as humans or as zombies (ibid.). While the Zombies, Run! application is an example of a fully-fledged game where the players can influence the gameplay through their actions in real life, then Fitogracy, for example, incorporates gamification elements without being a full game. It is a social website where people can post different fitness activities, earn points and badges for these, add and follow other users and see their activity (Morford et al., 2014:33). The points and badges combined with connecting to one's friends are said to encourage friendly competition between users (Dicheva et al. 2015:76), thus in turn again increasing also user engagement.

There are also examples of gamification being used in the treatment of serious illnesses. For example, different applications have been developed to help patients tackle diabetes and cancer better. Seaborn and Fels (2015:25) describe an application designed by Cafazzo et al. (2012) to support children diagnosed with Type I diabetes. The application awards points based on how many times the users measured and entered their blood glucose level in the application. Stinson et al. (2013, cited in Seaborn and Fels 2015:25) developed an application to engage young cancer patients in writing a pain diary. Users had to write their pain records regularly in order to get badges and rewards and complete missions. Rose et al (2013, cited in Seaborn and Fels 2015:25) empirically studied the

effect mySugar, a mobile diabetes monitoring application, had on users' behaviour. The research into all of these applications showed an increase in the frequency users measured their blood sugar level or recorded their pain and in the case of mySugar 85% of participants continued to use the application also after the three-month trial period (Seaborn and Fels 2015:25).

Gamification has been applied in education mostly in the form of an application or an online course. For example Duolingo, a free online language learning program, provides an opportunity to study many languages and incorporates different gamification elements such as earning points, moving between levels, and a graphic indication of user's progress and how it measures against the progress of their friends also linked to the application (Morford et al. 2014:34).

However, there are also some other types of examples of gamification used in education. Morford et al. (2014:34) describe a public charter school in New York City where the design of school curricula has been gamified. Students do not get grades but earn levels by accumulating a required number of points they receive for different activities. These levels show how far they are in a particular topic. The students do not take final exams but fight boss levels which are usually weeklong projects where they work in teams and have to demonstrate their problem solving skills in situations that require everyone's combined skills. Students' abilities are also assessed through having them teach a digital character how to solve problems in different subject (ibid.). Bruder (2015:57) provides another slightly different example of gamification in education. One 4th-grade teacher has redesigned his classroom for an eight-week citizen project that he has modelled based on the game Risk. The game he has made for this project chronicles his life and portrays his experiences of non-violent learning through his travels (ibid.).

1.3 Criticism and response

Critics of gamification have pointed out that gamification has so far mainly meant the use of extrinsic rewards (Ferrara 2013:291) such as points, badges, leaderboards. Gamification, however, is a complicated process and such a superficial approach would only give superficial or even no benefits (Cheong et al. 2014:233). Due to that kind of superficial approach, gamification has also been referred to as pointification (simply adding points to systems) (Robertson 2010 in Richter et al. 2015) and exploitationware (Bogost 2011 in Richter et al. 2015), and some researchers have expressed the need for developing gamification systems that create intrinsic motivation (Richter et al. 2015). It has even been claimed that giving rewards in the form of badges and encouraging competition and social comparison via a leaderboard (Appendix 6) can actually harm motivation (Hanus and Fox 2015 in Faiella and Ricciardi 2015:16).

Most of the examples of gamification that have been discussed in various mapping studies and literature reviews so far have focused mainly on working with extrinsic motivation using points, badges, rewards, and have incorporated only a few elements that work on intrinsic motivation. Seaborn and Fels (2015: 27) analysed 31 papers discussing the application of game elements in different contexts and found that these empirical studies dealt mostly with elements dealing with extrinsic motivation (e.g. points (in 18 studies), badges (15), rewards (11), leaderboards (11)) and only a few elements with the potential of influencing the intrinsic motivation of the participant were included (e.g. achievements (3), narrative (1), feedback (1)). Dicheva et al. (2015) reviewed research papers on the application of gamification in education and also found that the majority of cases had focused on using rewards, leaderboards, and similar elements.

However, gamification is not just about giving badges and setting up leaderboards.

Recently, a distinction has been made between reward-based and meaningful gamification.

The former involves working with and influencing mainly extrinsic motivation, the latter

intrinsic motivation (Nicholson 2015). Nicholson (2015:5) suggests six concepts that could be part of meaningful gamification – play (giving the freedom to explore and fail within boundaries), exposition (creating stories for participants that are integrated with the real-world setting and allowing them to create their own stories), choice (giving also the participants the power to choose), information (using game elements to help players learn more about the real-world context), engagement (encouraging participants to discover and learn from others in the real-world setting), reflection (helping participants to associate past experiences and other interests with new ones to deepen engagement and learning). Some researchers have also pointed out that not all students experience the same elements in the same way. For example Faiella and Ricciardi (2015:16) have stated in their review of literature on gamification that the results of different studies have shown that some motivational elements (e.g. competition with others) that otherwise received positive comments were seen as negative by some participants which has given support to the idea that different player types experience the same elements differently.

Kim (2015:30) argues that although player types can be divided into two categories in the context of gamification (those who are willing to play for extrinsic rewards and those who are not), in real life people are likely to display characteristics of more than one of these types and to different degrees. In addition, members of the target group may also belong to multiple user groups, therefore making it necessary to carefully consider types of motivation that appeal to different user types when designing gamification and to avoid overly emphasising one of them over others (ibid.).

Thus it has become more and more clear that it is important to incorporate different elements of gamification and to balance the elements working with extrinsic motivation with elements influencing intrinsic motivation. Dicheva et al. (2015) have also concluded in their literature review of research conducted on gamification in education that it is very

important to find and share ways of applying gamification to education that are not limited to extrinsic rewards but are also more meaningful to students. They also emphasise that the majority of the authors of the papers they reviewed agreed that gamification has the potential to improve learning if it is well designed and used correctly (Dicheva et al. 2015:83).

1.4 Gamification elements

Rebetez & Bétrancourt (2007) have stated that in order to better integrate video games into the classroom, teachers should be more aware of what is involved in the game, which contents are presented, and how the use of gamification could affect the player. Also, better knowledge of the effects and potentials of games is needed for the better use of games in school. Keramidas (2010) suggests using the principles of game design as a model for developing new pedagogical practices to move from just using games as tools to applying the principles at work in games to larger systems. Furthermore, knowing the underlying principles and elements of game design saves teachers from having to know the intricacies behind a complete game and allows them to focus on incorporating game elements into the methods they are already familiar with (ibid.). Thus it is important to identify the different elements that can be categorised under gamification.

Different gamification taxonomies have been offered to try to identify elements characteristic to games and not only in academic context. Gee (2008) and Gentile & Gentile (2008) were among the first to discuss different elements present in games, but their focus was more on the presence of educational principles in games. Other researchers have tried to identify and categorise game elements. Prensky (2001:30-31) proposed twelve elements that make games engaging: 1) games are a form of fun, which gives people enjoyment and pleasure, 2) games are a form of play, which gives people intense and passionate involvement, 3) they have rules, which gives structure, 4) they have goals,

which gives motivation, 5) they are interactive, which gives people an opportunity for doing, 6) they are adaptive, which provides flow, 7) they have outcomes and feedback, which supports learning, 8) they have win states, which gives ego gratification, 9) they have conflict/competition/challenge/opposition, which gives adrenaline, 10) they have problem solving, which sparks creativity, 11) they have interaction, which gives social groups, 12) they have representation and story, which gives emotion.

Reeves & Read (2010) suggest ten categories: self-representation with avatars (ability to create an identity for oneself, to be part of the story and thus engage more with the game), three-dimensional environments, narrative context (good backstories help to keep people engaged), feedback (quantitative feedback increases engagement in the action), reputation/ranks/levels (visible to everybody, hard to manipulate, gamers' place is identified in the game hierarchy, make their competencies/talents/experience apparent), marketplaces and economies (for trading points/currencies into something the player wants), competition under rules that are explicit and enforced, teams, parallel communication systems that can be easily reconfigured (being able to chat with team members, by voice or text), time pressure (racing against the clock is said to be fun for gamers).

Zichermann (2011) lists six rules for (successful) gamification – understand what a 'win' means for the organisation, understand the intrinsic motivation of the player and progress to mastery, design for the emotional human (rather than the rational one), develop meaningful and scalable intrinsic and extrinsic rewards, use platform vendors, make everything a little more fun. All of these share the ideas that games have rules and goals, provide feedback and opportunity to socialise, are fun, and work on the players' motivation and emotions. Disengagement from school is said to happen at the social and emotional levels (Rock 2004 in Lee & Hammer 2011), levels that gamification elements work at, thus

making it a tool that can affect students' emotional experiences, their sense of identity and their social positioning (Lee & Hammer 2011), and, potentially, their engagement with school and learning.

Yu-kai Chou, a gamification expert, has created his own gamification framework titled Octalysis, usually represented in the form of an octagon. It has eight main categories that also include different examples from games (Appendix 1). It features many of the categories that have been mentioned by other researchers as well, e.g. giving meaning to the game, empowering the player, allowing social interaction, showing accomplishments and ownership, avoidance (trying to avoid something negative). Chou has added two elements to the list - scarcity and unpredictability. In his list, scarcity means the drive of wanting something because you cannot have it, unpredictability is defined as the drive of wanting to know what will happen next.

Cugelman (2013) has reviewed some of the gamification taxonomies and has identified seven core ingredients of gamification that are clearly linked to proven behaviour change strategies and has also associated them accordingly with specific gamification tactics. The tactics are providing clear goals, offering a challenge, using levels, allocating points, showing progress, providing feedback, giving rewards, providing badges for achievements, showing game leaders, and giving a story or theme. Whereas some of the gamification elements suggested by other authors are only applicable in the case of web or digital applications, the tactics proposed by Cugelman can be used (in education) also without the necessary application of digital devices.

Attempts have also been made to categorize and group game elements suggested by various researchers. Literature reviews and surveys have been compiled on research made on gamification by e.g. Seaborn and Fels (2015), Faiella and Ricciardi (2015), Dicheva et al. (2015), Hamari et al. (2014), and one of the tables that several papers

included on categorising game design elements is that of Deterding et al., suggested in 2011 (Appendix 2). This is one of the earliest attempts to specify the game elements and their different levels of abstraction based on the literature available on this topic at that time (Seaborn and Fels 2015:16). Although many papers cite this categorization, few have used it as the basis for their empirical research into the topic.

Cheong et al. (2014:234) have discussed an alternative approach to categorizing game elements which divides these into dynamics, mechanics, and components (Appendix 3). According to this approach, game components are specific forms game mechanics and dynamics take, game mechanics the processes that players engage in when playing, and dynamics the higher level aspects of game that have to be considered but not necessarily directly implemented into games (Cheong et al. 2014). Blohm and Leimeister (2013 in Seaborn and Fels 2015:19) and Robson et al. (2015) have suggested similar categorizations of game elements (Appendices 4 and 5) but instead of separating game components from game mechanics and dynamics, they have integrated the component into the mechanics and dynamic categories, depending on what the components work with or influence the most. Both approaches have also added a third category that represents the users' connection or engagement to the game mechanics and dynamics - Blohm and Leimeister discussing the possible motivational factors and Robson et al. the emotional engagement of the player. The dynamics and mechanics categories in both frameworks seem to overlap. Robson et al. (2015:416) have explained game mechanics as the setup, rules, and progression in a game or gamified system which applies also well to the elements included in the mechanics category in Blohm and Leimeister's framework (2013 in Seaborn and Fels 2015:19) (Appendix 4). Game dynamics have been defined as the types of player behavior that emerge when players take part in a gamified experience (Robson et al.

2015:415) and this definition can also be used to characterize the elements under the dynamics section in Blohm and Leimeister's gamification framework.

For the purpose of finding and analyzing gamification elements in an EFL textbook set, the current thesis will follow the frameworks suggested by both Robson et al. and Blohm and Leimeister and combine these with the core game ingredients that Cugelman has identified based on reviewing different gamification taxonomies. This type of categorization is more applicable for the analysis of non-digital systems whereas the framework suggested by Deterding et al. seems to be more digital gameplay oriented.

After combining the game elements from the lists provided by Cugelman and Blohm and Leimeister, the list of game elements used for analysis in the second chapter is as follows: collection (scoring systems e.g. allocating points, trophies, providing badges for achievements), leaderboards (scoreboards, rankings, showing game leaders, showing progress), ranks (reputation points, acquisition of status), development (levels), rewards, group tasks, time pressure, quests (tasks), virtual worlds (avatars, virtual trade, giving a story or a theme), exploration, competition, collaboration, challenge, clear goals, feedback, documentation of behaviour. The list does not differentiate between the elements of game mechanics and game dynamics but sees them as equal categories and thus also the elements under these as of equal rank. Similar concepts are categorised together to provide a less fractured framework for the analysis conducted in the second chapter. An extra category, that of emotional connection, is added to the list from the framework suggested by Robson et al. as the connection of the user to the gamified system is just as equal as game mechanics or dynamics and cannot be disregarded.

In order to make the categories clearer, some definitions of terms are needed. Seaborn and Fels (2015) have compiled a short legend of game element terminology (Appendix 6) that provides definitions and also alternatives to some most common game element terms.

This was taken as the basis for creating the game element categories for the purpose of this thesis. According to Seaborn and Fels (2015:20), points in gamification are numerical units indicating progress and badges or trophies are visual icons signifying achievements. Both points and trophies are something that are usually collected in a game, therefore they can be placed under the category of collection. They differ in that badges or trophies are earned for bigger achievements, e.g. for reaching a certain score or level whereas points are given also for smaller tasks. Rewards are similar to trophies but in game terminology trophies are usually just visual icons, whereas rewards are tangible, desirable items, also referred to as prizes or incentives (ibid.). Leaderboards or scoreboards are visual displays of ranks for comparison (ibid.), showing how players compare to others based on e.g. how many points or trophies they have acquired. Ranks are identified as textual monikers indicating progress (ibid.) and contain the extra nuance of status, of reputation. Levels are defined as increasingly difficult environments and different stages, areas, or worlds can be seen as levels (ibid.). As an integral part of levels is the movement to a higher, more difficult stage, it can be grouped together with development. Although Seaborn and Fels have not included definitions for elements under the category of game dynamics in their taxonomy, it is necessary to clarify the differences between some pairs of terms also from that group. Challenge and competition can be seen as closely related as competition often includes some aspect of challenge. However, challenge is regarded in this paper as a situation where a person competes against one's own skills or against some constraints whereas competition involves competing against someone else, whether alone or in pairs/groups. A similar relationship can be seen between group tasks and collaboration - working in groups requires collaboration between the team members. This paper differentiates between group tasks and collaboration in the sense that group tasks require input from all team members with the aim of creating a joint output whereas the tasks under the collaboration category do not have to produce a joint outcome.

When evaluating how the elements present in the books analysed exploit the potential of gamification, it must be borne in mind that although researchers suggest different categorisations of game elements (for example into game mechanics, dynamics, components (Cheong et al., 2014) or mechanics, dynamics, motives (Blohm and Leimeister (2013) in Seaborn and Fels (2015:19)), they do not necessarily suggest which elements or groups might provide a better gamification result. The effectiveness of a gamified project depends on different variables that all can influence its outcome. Kim (2015) has discussed what to consider in designing gamification to get the wanted results. She has concluded that the game elements have to be chosen wisely, thoughtfully, and selectively with a clear goal and a thorough understanding of the target audience, the nature of the target activity, and the gamified learning content. Therefore it can be claimed that all game elements have the potential of yielding positive results in the context of gamification if chosen correctly for the given purpose. For that reason, this paper regards the categories of elements to be of equal importance when assessing the use of game elements in an EFL coursebook set.

2 GAME DESIGN ELEMENTS IN THE SOLUTIONS SECOND EDITION TEXTBOOK SET

The aim of this chapter is to determine whether game design elements exist in a textbook set for teaching English as a Foreign Language, in what context and to what degree. This paper does not attempt to provide a manual for gamifying EFL textbooks, but to analyse a textbook set from the perspective of gamification to see what kind of support a textbook set could provide for implementing gamification in the EFL classroom. The analysis will be based on the game element categories discussed at the end of the first chapter.

The set analysed is *Solutions Second Edition* by Tim Falla, Paul A. Davies, Jane Hudson, Caroline Krantz, and Amanda Begg (2012), a five-level EFL course for teenagers which is used in many schools in Estonia in both secondary and upper secondary schools. The current thesis will analyse the intermediate level textbook set which corresponds to the B1 level in the Common European Framework of Reference for Languages. This is the level students are expected to achieve in English by the end of their 9th grade in Estonia and is usually the level they start their English studies at in upper secondary schools. The *Solutions Second Edition* intermediate level textbook set consists of Student's Book (paper and digital version), Workbook (paper and digital version), Teacher's Book, Words mobile phone app, Online Workbook, Teacher's Resource CD-ROM, Test Bank CD-ROM, and iTools. This paper discusses game elements found in the Student's Book, the Workbook, and the Teacher's Book. These are the parts that majority of teachers use on a daily basis and that create the backbone of the set. The digital versions of the Student's Book and the Workbook are also included in the analysis as they are usually sold paired with the paper editions.

2.1 Student's Book

The Intermediate level Student's Book in the Solutions Second Edition consists of ten units, each in turn contains 7 lessons and a revision part. Each unit has a different general topic but all of the ten units follow the same structure: lesson A focuses on introducing new vocabulary and on developing listening skills, lessons B and D are about grammar practice, lesson C discusses some cultural aspect in connection to the main topic of the unit, lesson E's main emphasis is on developing reading skills, lesson F gives extra speaking tasks, usually in the form of role plays, and lesson G provides writing practice. In addition, each unit also has some extra tasks and extra resources in the Grammar Builder and Vocabulary Builder sections that are located at the end of the book. The book also contains five Get Ready for your Exam sections that contain extra tasks common to English exams, especially Cambridge English exams. All of these sections will be analysed for gamification elements.

The majority of game design element examples found in the Student's Book can be categorised under creating emotional ties or personal connection. When analysing the examples that fall under this category, six subcategories can be noticed:

1) Past events and personal experience. For example, in lesson 1D exercise 8 students use the prompts to talk about their past experience (something they forgot to do, something they tried to do, but could not, something they tried doing but did not enjoy, etc.), in lesson 2B exercise 8 students describe some occasion when they had a shock, in lesson 2D exercises 6 and 7 students describe their childhood and discuss what has changed since then, in lesson 9B exercise 8 students talk about whether they have ever had their eyes tested, hair dyed, luggage searched, etc, in lesson 10A exercise students discuss whether they have ever performed any of the music listed in the task.

- 2) Habits. For example, in Getting Ready for your Exam 1 in exercise 8 students discuss how often they go to restaurants and art galleries, in lesson 5A exercise 1 students discuss in pairs how often they use a computer and what they use it for.
- 3) Giving opinion on something and expressing preferences. For example, in lesson 1A exercise 7 students are asked to express their opinion on buying clothes and fashion in general, in lesson 1C exercise 7 students comment on the use of CCTV cameras and provide their opinion on that topic, in lesson 3A exercise 5 students discuss what job they would choose to have and describe it, in lesson 5D exercise 1 students discuss which of the jobs described in the text would be the most interesting for them, in lesson 7C exercise 8 students talk about their attitude towards poetry.
- 4) Plans for the future. For example, in lesson 3C students answer questions about going to university and studying abroad.
- 5) Self-analysis. For example, in the Skills Round-Up 1-2 students have to analyse themselves and decide whether they would make a good housemate in a shared house or not and why, in lesson 4C exercise 7 students have to work in pairs and decide on three ways how to make their lifestyle and diet healthier, in lesson 5C exercise 7 and 8 students make plans for their own time capsule that would characterise themselves and the current time and write a message to the people who will open their time capsule.
- 6) mixed. For example, in lesson 1B exercise 7 students answer questions about themselves and their plans (their habits, plans for the evening, things that people do to annoy them, etc.), in Getting Ready for your Exam 1 exercise 4 students both describe their past experience with shopping and provide their opinion on the subject, in lesson 8E exercise 6 students work in pairs and plan their ideal holiday with friends, giving them an opportunity to express their preferences and also to make plans, exercise 7 in lesson 10E provides a list of different abilities and students choose which ones they would like to have

the most, making them express their preferences but also forcing them to analyse what abilities they already have. So throughout the book students are given different opportunities to express their opinion and to use new vocabulary and grammar structures in a way that would be meaningful for them.

The other categories of game design elements appear in the Student's Book less frequently. Using the collection of something or a scoring system (rewards, badges, points, trophies) is explicitly mentioned only three times: in lesson 5A exercise 7 students work in pairs, invent a new app for a smartphone, present their ideas to the class and then vote for the best idea; in lesson 9E exercise 7 students present the class with ideas on what they would do if they had one million euros to give away and the class again votes for the best idea; and in lesson 6D exercise 8 students work in teams of two and compete against some other team, asking, answering, and reporting questions, and receiving points for every correct answer. The latter also falls under the category of competition and is the only example in that category. There are more tasks that have the challenge element (competing against their own skills) in them. For example in exercise 1 in lesson 1A students have two minutes to make a list of jobs they know in English. In addition to challenge, this task also contains the element of time pressure. The element of challenge can also be found in some other tasks, e.g. in lesson 3E exercise 1 students have to solve a riddle and in lesson 5A exercise 7 students have to invent a new app for a smartphone. Group tasks and team effort is also present in some lessons, for example in lesson 2C exercise 7 students work in group and write a fact file about an important date in history, in lesson 5C exercises 7 and 8 students work in groups or pairs on their time capsule, and in lesson 6D exercise 8 students work in pairs to compete against other teams.

Some tasks contain several gamification elements. For example lesson 6D exercise 8 includes giving points, competition, and work in groups, lesson 5A exercise 7 contains

challenge, group work, giving points, lesson 3A exercise 1 is both about challenge and time pressure, and lesson 8E exercise 6 can be categorised under bigger tasks but it also contains group work and expressing preferences.

There are also elements of two of the categories that are present in all of the units clear goals and feedback. Clear goals are presented at the beginning of each lesson and show what the student should be able to do after completing the lesson. For example, 1A - I can describe clothes, 1B - I can use different tenses to talk about the present and future, 1C - I can understand a text about surveillance, etc. A type of feedback can be seen in the writing lessons where the students are guided to provide feedback to their own work. At the end of each writing lesson there is a task connected to what that lesson is about (e.g. lesson 1G - writing an informal letter) and a set of questions that should help the students reflect on how well they completed the task.

The game elements found in the hard copy of the Student's Book are also present in its digital edition as the tasks are the same. The features that are different in the digital edition compared to the paper version do not contain any extra examples of game elements..

Game design elements are present in the Student's Book and can be placed under different game element categories. However, the majority of the examples fall under one category (personal ties and emotional connection) whereas other categories contain significantly fewer examples. In addition, some of the examples of game elements are in essence the same throughout the book, changing only in what the task refers to e.g. feedback in the form of writing task checklist in the writing sections of different units. Therefore, although there is a number of game design elements in the Student's Book, they are not very diverse and are in some part rather repetitive throughout the book.

2.2 Workbook

The Workbook is meant to supplement the Student's Book and has the same structure. At the end of each unit there is a Self Check section and, similarly to the Student's Book, the Workbook also contains Get Ready for your Exam sections. In addition, it also has separate review tests, Functions Bank, Writing Bank, wordlist for each unit, answers to the tasks in the Self Check sections, and a list of irregular verbs. The Functions Bank summarises different expressions and functional language covered in different units and the Writing Bank provides examples of different types of writing accompanied by the rules for each type. All of these sections were analysed for game design elements.

Similarly to the Student's Book, each lesson starts with the lesson outcome presented at the top of the page (e.g. 2A - I can describe how I feel). In some cases it is the same as in the corresponding lesson in the Student's Book, in some cases it can also be different, e.g. when a different aspect is discussed (e.g. 1C - the topic is still Big Brother and surveillance but the text is about using microchips to track products and people, thus the lesson outcome is also marked 'I can understand an article about tagging') or when in the reading section the subject of the text differs from what was dealt with in the Student's Book. In addition to having the element of clear goals, the Workbook also has the element of feedback in the form of self-check questions at the end of each writing lesson. These carry the function of guiding the students to reflect on and check their work themselves, just as in the Student's Book.

Compared to the Student's Book, however, the Workbook contains more elements of feedback. At the end of each unit there is a Self Check section with revision exercises and a chart for reflecting on the learning done during the unit. In the paper edition the answers to the Self Check sections are at the back of the Workbook and in the digital

version it is possible to get instant feedback in almost all of the tasks in all lessons. The reflection chart consists of the lesson outcomes presented at the beginning of each lesson in the Student's Book and gives the students the opportunity to assess themselves on how well they have achieved each target (there are three boxes to choose between: I need more practice, I sometimes find this difficult, No problem!), providing themselves with feedback on their progress. As it is possible to get feedback throughout the Workbook in different forms, it can be claimed that this category is the most represented out of the game design element categories.

When in the Student's Book game design elements can be found in different tasks, then in the Workbook they are mainly present in the 'Challenge!' tasks. The game elements that can be observed in these tasks fall under three categories: challenge (competing against one's own skills), tasks and quests, and personal ties and emotional connection. Similarly to the Student's Book, subcategories are visible in the personal ties and emotional connection section: past events and personal experience (e.g. lesson 2B, Challenge! - students write about the last time they lost something, lesson 6B, Challenge! students write about the last time they used their mobile phones and report some part of the conversation they had, etc.), habits (e.g. lesson 1B, Challenge! - students answer questions about their habits), giving opinion on something (e.g. lesson 6E, Challenge! - students comment on whether they think the Yeti or Mande Barung really exist, lesson 7E, Challenge! - students discuss what in their opinion are the most important qualities to look for in a partner, etc.), plans for the future (e.g. lesson 8D, Challenge! - students use indefinite pronouns when answering questions about their plans for their next holiday, etc.), self-analysis (e.g. lesson 7B, Challenge! - students make sentences comparing themselves with their best friend, lesson 7D, Challenge! - students talk or write about the things they would like to change in their lives), personal interests (e.g. lesson 4B, Challenge! - students find out information about their favourite sportsperson and write five sentences about them using past simple and present perfect tenses (adding also the element of challenge, restrictions to the task), lesson 10A, Challenge! - students write about the music they like and explain why they like it, etc.). Some tasks contain more than one of these subcategories, e.g. in Getting Ready for B2 Exams 1 in task 2 students answer questions about their school experience so far, discuss their future plans, and express their opinion on education and the school system in their country.

Compared to the emotional ties category, challenge and quest categories contain fewer examples and quite often the examples that fall under these categories contain more than one gamification element. The quest or task element can be seen in exercises that require the students to do some research or find extra information on something or somebody, for example in lesson 10E Challenge! task where students find out about the artists discussed in exercises 2 and 3 in the same lesson and write a paragraph about each artist describing how their disabilities affected their lives, in lesson 2D Challenge! task students find out what life was like in their town fifty years ago and write five sentences about that, in lesson 7C Challenge! task students write a short biography of a writer or a poet including details about their birth, life, loves, work, death, etc. The challenge category is represented mostly in the form of giving some restrictions to the students, e.g. having to use only specific tenses, specific structures or limiting their response to a specific number of sentences, for example in lesson 6A Challenge! task the challenge is in the limit of finding five compound nouns with the word 'sun' and in writing sentences with each. Similar tasks can also be found in lessons 1D, 4A, 7A, 9A. As mentioned before, lesson 4B Challenge! task combines the elements of personal connection (choosing their favourite sportsperson) and also challenge (having to write five sentences about the person using only two specific tenses). Similarly to that, lesson 2A and 7B Challenge! tasks also require

the students to provide a personal opinion on something, again combining different game elements.

As a conclusion it can be said that on the one hand the Workbook contains fewer examples of gamification elements in fewer categories than the Student's Book. The elements found can be categorised into only four categories and the number of examples in each is also smaller than in the Student's Book. On the other hand, however, the Workbook provides multiple ways for receiving feedback and the digital version of the Workbook gives instant feedback for the majority of tasks. So the element of feedback, especially instant feedback (which is considered important in gamification), is represented in the Workbook to a much higher degree than in any other part of this coursebook set.

2.3 Teacher's Book

Solutions Second Edition Intermediate Teacher's Book follows the same structure as the Student's Book and the Workbook. The Teacher's Book starts with an introduction into the course, discussing its contents and explaining the structure of the Teacher's Book. Before the lesson plans, the book also provides general advice and some tips on teaching vocabulary, grammar, reading, listening, writing, and speaking, In addition, there are also some tips on teaching mixed-ability classes and on correcting mistakes.

The main part of the Teacher's Book consists of lesson plans for each unit and lesson. Each unit starts with a map of resources that provides an overview of which pages from the Student's Book, the Workbook, the CD-ROM, and the Test Bank CD are connected to which lesson and also which Photocopiable Activities should accompany which materials. A lesson summary is presented at the beginning of each lesson, summarising and presenting three to five of the main focus points of that lesson e.g. the main topic, vocabulary, grammar, listening, speaking, reading, functional English, and

writing. Before the main exercises, some ideas are suggested about how to cover the same amount of material in 30 minutes (the average length of a lesson plan is meant for a 45-minute lesson) and about what to do as a lead-in to the lesson. The main part of the lesson plans in the Teacher's Book provides suggestions on how to approach the tasks in the Student's Book, gives answers to exercises, includes transcripts of the listening tasks, and offers occasional recommendations on how to tackle some of the tasks with weaker groups and how to extend some of the tasks for quicker students. There are also ideas for extra activities and special Culture and Language Notes that provide background information to different cultural aspects discussed in the exercises or draw attention to some especially tricky parts of language that the teacher and the students should be aware of and careful about. Each of the lesson plans ends with the lesson outcome where teachers are directed to encourage the students to reflect on what they learned in the lesson and how they managed to achieve the learning outcomes presented at the beginning of the lesson in the Student's Book.

Compared to the Student's Book and the Workbook, the Teacher's Book contains a higher number of gamification elements in eleven different categories compared to nine categories in the Student's Book and five in the Workbook. All the categories that are represented in the Student's Book and the Workbook are also present in the Teacher's Book. As the main function of the Teacher's Book is to provide suggestions and advice on how to use the Student's Book most effectively, some of the examples found in the Teacher's Book overlap with the ones in the Student's Book, e.g. the same task description has been presented in both cases. Despite that, the Teacher's Book provides also extra ideas and recommendations and thus contains more game elements than the other parts of the set. The game elements can be found not so much in the exercises and tasks themselves but in the suggestions on how teachers could present these tasks to the students and also in

extra advice on e.g. how to start the lesson, how to extend a task, what to offer to fast finishers.

Similarly to the Student's Book and the Workbook, the category with the highest number of examples is the one about forming personal ties and emotional connection. 68 examples from the Teacher's Book can be placed under this category compared to 29 from the Student's Book and 28 from the Workbook, which means that although it is the category with the highest number of examples in all three cases, more than two times more tasks appear in the Teacher's Book than in other parts of the set. The same subcategories as in the Student's Book and the Workbook can also be noticed in the Teacher's Book. From these, three bigger subcategories emerge:

- 1) past events and personal experience, e.g. students talk about their memorable firsts their first pet, first day at school, etc. (lesson 2B, lead-in), in lesson 4F lead in students discuss the last time they were ill, in lesson 6B under exercise 9 students think of occasions when they thought someone was not telling them the truth and share the stories with the class, at the beginning of lesson 9E students tell stories about any lucky escapes they have had, etc.;
- 2) giving opinion on something, e.g. students are asked to explain their stand on surveillance (lesson 1C), provide their opinion on e.g. fashion magazines and designers (lesson 1D), taking photos (lesson 1F), sayings about money (lesson 9A, extension), discuss whether schools should try to improve students' diets or not (lesson 4C, exercise 3), etc.;
- 3) mixed tasks, e.g. in lesson 4D lead-in task students think about their experience with different puzzles (talking about past experiences) and also provide their opinion on different puzzles (giving opinion), in lesson 9B lead-in task student discuss what their reaction would be to someone who e.g. never irons their clothes, has large tattoos, wears a

lot of make-up, etc. (previous experience combined with self-analysis), in lesson 10E leadin task students talk about what kind of art they do and do not like, and whether they consider themselves to be creative (giving preferences, talking about habits, self-analysis), etc.

Emotional connection and personal ties are also created when the students have to show their preferences on something (e.g. in lesson 1A students discuss their preferences on clothes, in lesson 10E exercise 7 students discuss what abilities from the list presented there they would like to have the most, etc.), discuss their habits (e.g., in lesson 4G lead-in task students discuss how they relax when they are stressed, in lesson 9D lead-in task students discuss how often they go out in the evening, what they do, how they get back home, in lesson 5F lead-in task students discuss what they usually do on a typical weekend, etc.), talk about their plans for the future (e.g. in lesson 5F exercise 8 students discuss their plans for the weekend), and have to analyse themselves (e.g. in lesson 3B students discuss who they wanted to be when they were in primary school and how their ambitions have changed, in lesson 9G lead-in task students write down three things that make them happy and three things they do not have but that would make their lives better and explain their choices, etc.). There are also some examples that do not fit under any of the subcategories but make the students provide personal information. For example, in lesson 3A students discuss the jobs the members of their family have, in lesson 6A lead-in task students draw a rough floor plan of their living room and describe the room, the furniture and objects in it in as much detail as they can, in lesson 10A lead-in task students discuss the importance of music in their lives.

The second biggest category of game elements found in the Teacher's Book is the challenge category. Compared to the other parts of this coursebook set, the Teacher's Book contains 33 examples of challenge elements whereas the Student's Book has 4 and the

Workbook 10. So the number of tasks including the challenge element is significantly higher in the Teacher's Book. Tasks that fit under that category require students to test or compete against their own skills or include some constraints.

Similarly to the personal connection category, subcategories can be noticed also in the challenge category in the Teacher's Book. In the largest number of examples students have to use specific things when completing tasks, e.g. words or prompts provided by the teacher in connection to what has been learnt in the lesson or unit previously (e.g. in lesson 2E extra activity students work in groups or pairs and create a story similar to the one from that lesson using the prompts given by the teacher; in lesson 3C extra task students write sentences with words from that lesson; in lesson 7B extension task students prepare 4-6 questions they might ask someone they were meeting for the first time, each question containing a different comparison structure from exercises 2 and 3 from that lesson; in lesson 10E, as an extension to exercise 5, students get words and phrases from the text they read and have to come up with questions so that these words and phrases would be answers to the questions, etc.). Another subcategory for challenge is brainstorming different topics, e.g. in lesson 5F lead-in task students brainstorm in pairs different typical activities young people do at the weekend, in lesson 9C lead-in students brainstorm places where advertising appears, etc. Brainstorming can also be combined with time restriction, e.g. in lesson 3A students have two minutes to work in pairs and come up with as many jobs in English as they can. Some of the tasks under the challenge category involve memorising things, e.g. in lesson 8A extra activity students listen to the dialogues in exercise 6, write down keywords and then try to reconstruct the original dialogues, etc. This is in some cases also combined with time limits, e.g. in lesson 10C extra activity students have three minutes to read the text, remember as much information as they can, then close the books and answer the questions the teacher asks by heart. In addition to these subcategories, there

are also examples that do not form any substantial subcategories but still contain the challenge element, e.g. in lesson 7E extension to task 5 students find and underline the words and phrases from that exercise in the text and try to guess their meaning from the context.

The third largest category of game element examples in the Teacher's Book is the category of competition. This differs from the challenge category in that it involves competing against someone else whereas the tasks with the challenge element require competing against one's own skills or completing tasks with different constraints. Similarly to the challenge category, the Teacher's Book contains noticeably more tasks involving the competition element than the Student's Book or Workbook - 18 examples can be found in the Teacher's Book, one in the Student's Book and none in the Workbook. The examples in this category involve competition between all of the students (e.g. in lesson 5C students think of items they would put it a time capsule, create a message for the people who will open their capsule and present it to others, then the group will vote on who had the best choice of items and the best message; in lesson 4G students write and design an announcement, show it to others who choose whose is the best one or the most appealing; etc.) and also between pairs or smaller groups of students (e.g. in lesson 5A exercise 7 students work in pairs and invent a new application for a smartphone, later present it and the rest of the students vote for the best ones in different categories - most useful, most imaginative, best name; in lesson 9E exercise 7 students work in pairs and discuss what they would do if they had one million euros to give away, later present their ideas to the class and students vote for the best idea; etc.). Several examples from this category also include other game elements such as time pressure (e.g. in lesson 8A exercise 5 students work in pairs and come up with as many nouns and groups to add to each group as they can, who comes up with the most words in two minutes has won), feedback (e.g. in lesson 7A extra activity students write a biography of Dorothy Parker or analyse a poem in English, share their work with others and provide feedback to each other's work), receiving points or some other rewards (e.g. in lesson 5A lead-in students play a game in groups and receive points for correct answers and double for answers that nobody else has, the group with the highest total score wins).

Game design elements that fit under the categories of collaboration/cooperation, feedback, or clear goals are present in almost the same form in every unit in the Teacher's Book. Similarly to the category of personal ties and emotional connection, these categories contain a noteworthy number of examples but these do not differ in their nature as much as the examples in the personal ties' category. Therefore, on the one hand, in can be said that there are also numerous examples of these three game element categories in the Teacher's Book but, on the other hand, a large number of these repeat in the same form in different units, meaning there is not as much variety in the examples fitting these categories as in case of the emotional ties' category. Collaboration or cooperation can be seen in e.g. tasks that require discussing questions in pairs, which can be found in all units. Feedback and clear goals are combined in the Teacher's Book at the end of every lesson in the lesson outcome section that directs teachers to reflect with the students on what they learned in that lesson and how they managed to achieve the lesson outcomes presented in the Student's Book at the beginning of the lesson. Different types of feedback are mentioned also in other parts in the Teacher's Book. Besides teacher-provided feedback (e.g. in lesson 4E exercise 8 students work in pairs discussing the questions, teacher should circulate the classroom, monitor their progress, and at the end of the activity address any general errors), the Teacher's Book also encourages teachers to direct students to provide feedback to both their own work (in lessons with focus on writing (all the lessons marked with letter G) when students finish their writing tasks they should check their writing against the writing task checklist in that lesson) as well as the work of their classmates (e.g. in lesson 7G they are encouraged to check their partner's writing against the writing checklist and provide feedback or in lesson 7C students work on different projects, share their work with the group and give feedback to each other's work).

Collaboration and cooperation take place also in team tasks but this paper differentiates between group tasks and collaboration in the sense that group tasks require input from all team members with the aim of creating a joint output. The tasks under the cooperation and collaboration category, however, do not have to produce a joint outcome. With fifteen examples, the category of team effort and group tasks is the fourth largest in the Teacher's Book. The tasks under this category range from shorter and simpler ones (e.g. in lesson 1D students work in groups and create a list of fashion designers and models they know) to lengthier and more complex ones (e.g. in lesson 1C extra activity students take part in a mock court case on installing CCTV cameras in their school, some students work in groups, some groups prepare arguments for and others against CCTV cameras in schools, some act as a jury who later decides who had the most convincing arguments). The more complex tasks also include other game elements, e.g. in the previous example of lesson 1C extra activity there is a combination of group effort, giving points (voting for the best arguments), competition (between teams supporting two different sides), and feedback (there is a suggestion at the end of the task description that the teacher could make notes on the use of verb patterns and provide feedback on that at the end of the activity).

The combination of different game elements is also characteristic of the other game element categories represented in the Teacher's Book - collection (scoring systems), time pressure, quests, and exploration. All these categories contain under ten examples which include also other game elements. For example, the use of different scoring systems in the Teacher's Book is always accompanied by some other element, most often the element of

competition (e.g. in lesson 2A extension task teacher gives definitions of adjectives discussed in the lesson, students receive points for correct guesses plus extra points for making correct sentences with the words, the one with the highest score wins). The same applies to the element of time pressure - the tasks that explicitly mention the use of time limit also contain some other game element, most often either the element of competition or the element of challenge (e.g. in lesson 3A students work in pairs and come up with as many jobs as they can in English in two minutes; in lesson 4B students have to complete a reading task within a time limit; etc.). Whereas the elements of competition and challenge are present in some tasks also without other game elements, collection and time pressure are in the Teacher's Book always combined with some other elements. The elements of exploration and quests differ from time pressure and collection (scoring systems) in the Teacher's Book in the sense that while the latter are also found in combination with only one other game element, the former are in tasks that include multiple game elements. Exploration is present in the Teacher's Book in the form of finding some extra information on a given topic or doing some research and is mostly found in tasks involving also the quest element, e.g. in lesson 6E extra activity students use the Internet to gather information from different sources on an unsolved mystery, prepare its short description, present it to the class using reported speech and expressions for speculation, later the whole class speculates about the mysteries and tries to offer possible explanations to these. In this task, exploration is combined with challenge, quests, and also team effort. The tasks that can be placed under the category of quests in the Teacher's Book require longer time to complete, consist of different stages or steps, and involve more than one other game element. E.g. already mentioned extra activity in lesson 6E; exercise 7 in lesson 8G students write a description of a place, research some extra factual information about it,

add photos to their description, the completed projects are displayed in the classroom and all the students choose from everyone's work the place they would like to visit the most.

The Teacher's Book contains significantly more game elements in a higher number of categories than the Student's Book and the Workbook. In addition, the categories represented overlap with the ones in the Student's Book and the Workbook as do some of the examples. Compared to the other two books in this set, the tasks with game elements in the Teacher's Book are more varied and also more often contain multiple game elements. The elements appear mostly in the suggestions on how to approach different tasks and what to do in a lesson, for example how to introduce different topics or how to extend tasks.

2.4 Gamification potential

The Student's Book, the Workbook, and the Teacher's Book combined contain eleven out of seventeen game elements discussed in this paper. As explained in the first chapter, game elements are seen as equal when assessing gamification in this paper. According to Kim (2015:30), although it is possible to differentiate between player types based on what motivates them, in real life people are likely to display characteristics of more than one type to different degrees. Furthermore, the target group of a gamified project is likely to consist of people with different player types and for this reason, when designing gamification, different game elements have to be included that work on the motivation of different user types (ibid.). Variety in game elements present in a gamified project is thus more important than the use of some specific element. With their eleven game element categories, the three books analysed in this paper seem to provide enough variety for successful gamification. However, for a better understanding it is necessary to also see how and to what level these elements appear in the books.

The represented categories can be divided into three larger groups - game elements present in the highest number of different tasks, elements found in almost the same form throughout different units, and game element categories with few examples or examples combining multiple elements. The categories of personal ties/emotional connection, challenge, and competition contain the highest number of different tasks with the element of personal connection being the most numerous in all three books (Figure 1).

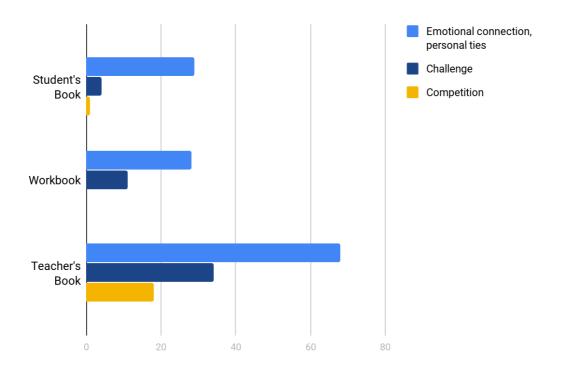


Figure 1. Game element categories with the highest number of different examples. The personal connection element is not in absolutely every lesson but in a large majority of them. Although the element of challenge can be found in only half as many tasks as the personal ties element, it is still the second most numerous element and is in every unit, either in the Student's Book, the Workbook or the Teacher's Book. These two categories are also the only ones where it is possible to see subcategories of the tasks containing these, thus providing the teacher planning lessons based on these materials with a variety of different possibilities of including these elements in their lessons. Although subcategories do not emerge from the tasks containing the element of competition, it is still

the third most numerous category in terms of different tasks and, similarly to the other two in this group, also provides different possibilities for application.

The elements of clear goals and feedback are also consistently present in every unit but whereas the tasks containing the elements of challenge and emotional connection vary throughout the books, clear goals and most of feedback do not. They occur in the same form and place in all units, changing only the content. Therefore, although this group of elements is also well-represented in these books, they do not appear in as varied tasks as the first group. Collaboration can also be grouped with clear goals and feedback in the sense that it can be seen in tasks throughout the units but, differently from the last two, it appears only in the Teacher's Book.

The rest of the eleven categories (collection, time pressure, quests, team effort, exploration) either share tasks or contain only a few examples and compared to the previous two groups are actually relatively empty. So although it can be said that these game element categories are represented in the books analysed, there are significantly fewer examples compared to the categories discussed previously. Thus these materials do not provide much support for teachers in applying these game elements to their lessons.

In terms of what elements appear in these books and how, it can be granted that all three books combined do contain a decent variety of game elements but with an imbalance in their representation. As illustrated in Figure 1, there is noticeable imbalance already in the top three most represented game element categories and the gap between the most and the least represented categories is even bigger. According to Kim (2015:30), different types of motivation that appeal to different user types need to be carefully considered and balanced out for successful gamification and one of them should not be emphasised over others. Therefore, for better results, it is necessary for the teachers using these materials for building gamified systems to also add game elements to the ones already present.

Imbalance exists in these materials also in regards to what type of motivation the game elements target. The majority of the categories represented work on intrinsic motivation and the category of collection (collecting points, badges, trophies), although present in the books, is among the least represented ones. On the one hand, this means that external motivation is not overly emphasised and the gamification in these books has potential of belonging more to the meaningful type of gamification than to a reward-based one. This can be considered as a positive aspect as the need for developing gamification systems that create intrinsic motivation has been emphasised (Richter et al. 2015), mainly because the first gamification attempts used mostly elements working on extrinsic motivation. On the other hand, the imbalance still means that some aspects are less represented than others and there is not enough support for meeting the needs of students who could benefit from a higher degree of influence on extrinsic motivation.

Comparison of gamification in each of the three books shows imbalance also between the books. The Teacher's Book contains a significantly higher number of game elements both in regards to how many different categories are represented (11) and also how many different cases the elements appear in (171, excluding tasks of repetitive nature, e.g. where the nature of the task is the same throughout different units). Both the Student's book and the Workbook contain fewer categories (9 and 5 respectively) and game elements can be noticed in a smaller number of times in both of them (44 and 52 respectively). However, the possibility to check one's answers in the digital edition of Workbook increases the proportion of the feedback category in relation to others and increases also the gamification aspect in it. The almost threefold difference in the number of game elements in the Teacher's Book and in the Student's Book is in some part due to the Teacher's Book including also some of the tasks presented in the Student's Book. Game elements found in suggestions on how to present different tasks, introduce different topics,

etc. add to the shared content and thus increase the numbers for the Teacher's Book. As these three books form a whole and are meant to be used in combination as one tool, the imbalance in how game elements are dispersed among the three parts of a whole does not carry as much relevance as in case of the imbalances discussed earlier.

There is little regularity or consistency in the appearance of game elements in the books. Different units contain a different combination of elements and although this might be considered as bringing variety to the study process, it also means the support the materials provide for applying gamification varies throughout the materials. Clear goals and feedback, however, are an exception in this respect. These elements are used in all three books consistently in all units. Learning outcomes of each lesson are introduced in the Student's Book and in the Workbook at the beginning of the lesson. The same outcomes are in the Teacher's Book at the end of the lesson and are used as a reference point for reflecting with the students on what they learned in that lesson. The learning outcomes of all the lessons in a unit are presented in the Workbook at the end of corresponding units in the Self Check section. The same combination repeats in all units and creates structure that can be used for building gamified systems on.

Although the imbalanced representation and the rather inconsistent occurrence of the game elements reduces the potential of these materials for successful gamification, several aspects still support using these for gamified lessons. The structure created by the elements of feedback and goals in the three books combined lays a solid foundation for building gamified systems for different units. The examples from the eleven different game element categories represented in the books provide a decent amount of building blocks to use when designing gamification. In addition, many of the suggestions in the Teacher's Book on how to introduce tasks can be applied also in other similar cases, thus increasing the amount of gamified content. Based on this, it can be claimed that a regular coursebook

set can also provide support in applying gamification to EFL lessons and new methods can be introduced without having to change the traditional tools in use so far. However, proper input from the teacher is still of vital importance in achieving a balanced gamified design.

CONCLUSION

According to Merike Saar (2017), we currently have a situation where it is common that a 21st century student, a 20th century teacher, and 19th century methods meet in our classrooms. Generation Y, the generation in schools right now, has been born into world of IT and social media, which influences the way they learn. They are referred to as the generation of computer games who want also their work environment to be playful and gamified (Saar-Veelmaa 2017). The new generation and their way of learning demands changes also in the school environment. Living in a digital age with digital natives, educators have to be receptive to new methodologies of learner engagement that might help to shape a learning environment better suited to the new type of learners (Dyer 2015:65). The Estonian Lifelong Learning Strategy 2020 (ELLS 2020) also sees need for a change in the approach to learning and states that teachers with their pedagogical beliefs and skill sets play an important part in achieving it.

Gamification, the use of game elements in non-game contexts (Deterding et al. 2011), strives to use the motivational power of games in solving real-world problems such as students' lack of motivation in school (Lee & Hammer 2011). It has mostly been used in marketing, politics, health, etc. and is thought to have great potential also in education as it helps to increase both user engagement and motivation (Simões et al. 2013, Seaborn and Fels 2015). Compared to other strategies tackling motivation, gamification is claimed to be the one that constantly promotes motivation, addressing both intrinsic and extrinsic motivation (Figueroa 2015: 33), making it a powerful tool also in education.

The aim of this thesis was to locate and analyse gamification elements in a coursebook set used in Estonian schools to see how and to what extent gamification is present in one of the most common tools used by EFL teachers. This would provide an idea of what would the starting point be in using gamification in EFL lessons and what

kind of support it could give for gamifying EFL classes. Knowing game elements would help teachers incorporate the elements into the methods they are already familiar with (Keramidas 2010). Analysing materials from the perspective of different strategies can also help to see them in a new light and therefore support the more effective use of these, which is listed in the ELLS 2020 as one of the steps that could help to stimulate learners' interest in learning.

The first chapter of the thesis defines the term, introduces examples of gamification, discusses criticism regarding this concept, and identifies game elements. Gamification is most commonly defined as the use of game elements in non-game contexts (Deterding et al. 2011). It differs from similar concepts such as games with a purpose and alternate reality games in that it is used for non-entertainment purposes and it uses the elements that make up games without creating a fully-fledged game (Seaborn and Fels 2015:27). The latter also adds to the value of gamification in educational settings as, according to Kapp (2012a in Dicheva et al. 2015:75), creating a highly engaging, full-blown instructional game is difficult, time consuming, costly, and it usually targets only one set of learning objectives chosen by the game designer. Effective classroom use of educational games often requires specific technical infrastructure and appropriate pedagogical integration whereas separate game elements can be picked based on what are most suitable for the context and participants for achieving set goals as effectively as possible (Dicheva et al. 2015:75).

Critics of gamification have drawn attention to the excessive use of extrinsic rewards (points, badges, leaderboards, etc.) in gamified projects (Ferrara 2013:291) and have degraded it to mere pointification (simply adding points to systems) (Robertson 2010 in Richter et al. 2015) and exploitationware (Bogost 2011 in Richter et al. 2015). Reviews of empirical studies and research papers analysing the application of gamification have

shown that the first attempts to apply gamification did indeed focus too much on extrinsic motivation (Seaborn and Fels 2015, Dicheva et al. 2015). This has led to differentiating between reward-based and meaningful gamification, the former influencing mainly extrinsic motivation and the latter intrinsic motivation (Nicholson 2015).

Kim (2015) has pointed out that instead of overly emphasising one type of motivation, different types need to be considered and balanced out when designing gamification. The target groups of gamified projects are rarely homogenous in terms of what elements increase their motivation and also one player can be motivated by different aspects. In addition, the same elements can be experienced differently by different people (Faiella and Ricciardi 2015:16), which further supports the need to include and balance out different elements in designing gamification.

In order to conduct the analysis of a coursebook set, game elements had to be identified. A framework of game elements was created for the analysis based on the taxonomies suggested by Cugelman (2013), Robson et al. (2015), Blohm and Leimeister (2013 in Seaborn and Fels 2015:19). These taxonomies were chosen for the purpose of this thesis because, compared to other gamification taxonomies suggested by researchers, they are also suitable for analysing non-digital systems. Similar or overlapping concepts were categorised together to provide a less fractured framework for the analysis. The full list of elements and definitions of terms is provided at the end of the first chapter.

The materials analysed in the second chapter were the Student's Book, Workbook, and Teacher's Book from the *Solutions Second Edition* intermediate level coursebook set by Tim Falla, Paul A. Davies, Jane Hudson, Caroline Krantz, and Amanda Begg (2012). Each book was assessed separately based on the game element categories presented in the first chapter and later a combined analysis of the elements found was conducted.

The results of the analysis show that the books contain game elements from eleven

out of seventeen categories - emotional/personal connection, challenge, competition, clear goals, feedback, collaboration, collection, time pressure, quests, team effort, exploration. The first two elements appear in the largest number of different tasks compared to other elements in all three books. The element of emotional connection can be noticed in almost twice as many cases as the element of challenge and the gap with other categories is even bigger in this respect. Similar imbalance exists also in terms of what motivation the elements target as noticeably more of the elements found in these materials are connected to intrinsic motivation. Although emphasis on intrinsic motivation can be considered positive, a balanced representation of elements should be strived for in order to achieve the best results in designing gamification (Kim 2015).

Compared to the other books, the concentration of game elements is almost three times bigger in the Teacher's Book. The autocheck option in the digital version of the Workbook adds noticeable weight to the category of feedback, making the Workbook more gamified than the Student's Book. The categories of feedback and clear goals are also the only ones that appear systematically in the materials whereas no similar pattern can be seen in case of other elements. The structure that feedback and clear goals form encompasses all three books and creates a solid foundation for building gamified systems based on different units.

The results of the analysis indicate that despite some of its shortcomings regarding gamification (e.g. the imbalanced representation of the elements), this coursebook set has considerable potential for the successful application of gamification. The structure formed by goals and feedback together with the game elements present in the books give a good foundation for building one's own gamified systems. However, in order to create balanced and well-functioning gamified systems of learning, some more game elements should be combined with the ones already present. Therefore, extra input from the teacher is also

needed.

Based on the findings of this thesis, it can be claimed that although gamification is mostly seen and used in digital context, also a regular coursebook set can provide support for implementing it and traditional tools do not have to be discarded when exploring the possible applications of new methods. This thesis hopefully encourages teachers to experiment with applying new methods to the materials they work with on a daily basis and to explore gamification's potential to motivate and engage present day students. The list of game elements compiled in the first chapter could also serve as basis for a practical application of the game elements identified.

REFERENCES

- Bruder, Patricia. 2015. GAME ON: Gamification in the Classroom. *Education Digest*, 80: 7, 56-60.
- Cheong, Christopher, Justin Filippou, and France Cheong. 2014. Towards the Gamification of Learning: Investigating Student Perceptions of Game Elements. *Journal of Information Systems Education*, 25: 3, 233-244.
- Chou, Yu-kai. 2014. Octalysis: Complete Gamification Framework. Available at http://www.yukaichou.com/gamification-examples/octalysis-complete-gamification-framework/#.VLARUs2UfVN, accessed March 20, 2016.
- Cugelman, Brian. 2013. Gamification: What It Is and Why It Matters to Digital Health Behavior Change Developers. *JMIR Serious Games*, 1:1. Available at http://games.jmir.org/2013/1/e3/#box1, accessed March 20, 2016.
- Deterding, Sebastian, Dan Dixon, Rilla Khaled, and Lennart Nacke. 2011. From game design elements to gamefulness: defining gamification. *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 9-15.
- Dicheva, Darina, Christo Dichev, Gennady Agre, and Galia Angelova. 2015. Gamification in Education: A Systematic Mapping Study. *Educational Technology & Society*, 18: 3, 75-88.
- Dyer, Ronald. 2015. Conceptual Framework for Gamification Measurement. In Torsten Reiners and Lincoln C. Wood (eds.), *Gamification in Education and Business*, 47-66. Switzerland:Springer International Publishing.
- Estonian Lifelong Learning Strategy 2020. 2014. Available at https://www.hm.ee/en/estonian-lifelong-learning-strategy-2020, accessed January 27, 2018.

- Faiella, Filomena and Maria Ricciardi. 2015. Gamification and Learning: A Review of Issues and Research. *Journal of e-Learning and Knowledge Society*, 11: 3, 13-21.
- Ferrara, John. 2013. Games for persuasion: Argumentation, procedurality, and the lie of gamification. *Games and Culture*, 8:4, 289-304.
- Figueroa Flores, Jorge Francisco. 2015. Using Gamification to Enhance Second Language Learning. *Digital Education Review*, 27, 32 54.
- Gee, James Paul. 2008. Good Video Games and Good Learning: Collected Essays on Video Games, Learning and Literacy. New York: Peter Lang Publishing, Inc.
- Gentile, Douglas A. and J. Ronald Gentile. 2008. Violent Video Games as Exemplary Teachers: A Conceptual Analysis. *Journal of Youth and Adolescence*, 37:2, 127-141.
- Haaristo, Hanna-Stella. 2015. Koolist väljalangevus on Eestis kõrge kõigil haridustasemetel. *Mõttehommik*, February 6. Available at http://mottehommik.praxis.ee/koolist-valjalangevus-eestis-korge-koigil-haridustasemetel/, accessed February 25, 2016.
- Haridus- ja Teadusministeerium. 2018. Õpikäsitus. Available at https://www.hm.ee/et/opikasitus, accessed January 27, 2018.
- Haridus- ja Teadusministeerium. Üldharidusprogramm 2017-2020 (õppekava ja õppekorraldus). Available at https://www.hm.ee/sites/default/files/6_uldharidusprogrammi_2017-2020_eelnou_1.pdf, accessed January 27, 2018.

- Hamari, Juho, Jonna Koivisto and Harri Sarsa. 2014. Does Gamification Work? A Literature Review of Empirical Studies on Gamification. In proceedings of the 47th Hawaii International Conference on System Sciences, Hawaii, USA, January 6-9, 2014.
- Keramidas, Kimon. 2010. What Games Have to Teach Us About Teaching and Learning: Game Design as a Model for Course and Curricular Development. *Currents in Electronic Literacy*, 2010. Available at http://currents.dwrl.utexas.edu/2010/keramidas_what-games-have-to-teach-us-about-teaching-and-learning, accessed February 28, 2016.
- Kim, Bohyun. 2015. Understanding Gamification. *Library Technology Reports*, 51:2, 5-35.
- Klopfer, Eric, Scot Osterweil, Jennifer Groff, and Jason Haas. 2009. Using the Technology of Today, in the Classroom Today. The Instructional Power of Digital Games, Social Networking, Simulations and How Teachers Can Leverage Them. Massachusetts Institute of Technology. Available at http://education.mit.edu/wp-content/uploads/2015/01/GamesSimsSocNets_EdArcade.pdf, accessed February 25, 2016.
- Kumar, Balraj and Parul Khurana. 2012. Gamification in Education Learn Computer Programming with Fun. *International Journal of Computers and Distributed Systems*, 2:1, 46-53.
- Lee, Joey J. and Jessica Hammer. 2011. Gamification in Education: What, How, Why Bother? *Academic Exchange Quarterly*, 15:2. Available at https://www.academia.edu/570970/Gamification_in_Education_What_How_Why_Bother, accessed February 25, 2016.
- Minkhov, Mikhael (ed). 2014. Proceedings of the 22nd CEEMAN Annual Conference.When, Why and How is Technology Reshaping Management Education. Available at http://www.ceeman.org/docs/default-source/publications/ceeman-22nd-conference-proceedings.pdf?sfvrsn=2, accessed February 25, 2016.

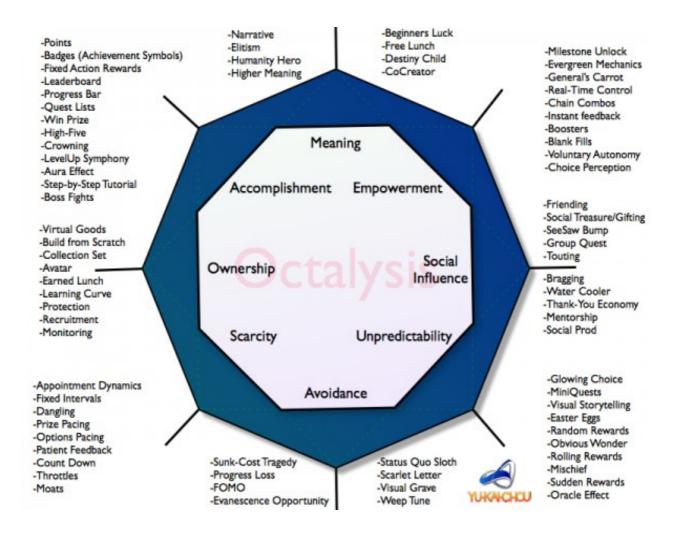
- Morford, Zachary H., Benjamin N. Witts, Kenneth J. Killingsworth, and Mark P. Alavosius. 2014. Gamification: The Intersection between Behavior Analysis and Game Design Technologies. *The Behavior Analyst*, 37: 1, 25-40.
- Nicholson, Scott. 2015. A RECIPE for Meaningful Gamification. In Torsten Reiners and Lincoln C. Wood (eds.), *Gamification in Education and Business*, 1-20. Switzerland:Springer International Publishing.
- Prensky, Marc. 2001. Digital Natives, Digital Immigrants. Available at https://www.marcprensky.com/writing/Prensky%20-%20Part1.pdf, accessed February 25, 2016.
- Prensky, Marc. 2001. Fun, Play and Games: What Makes Games Engaging. Available at http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Game-Based%20Learning-Ch5.pdf, accessed March 20, 2016.
- Rebetez, Cyril and Mireille Bétrancourt. 2007. Video Game Research in Cognitive and Educational Sciences. *Cognition, Brain, Behavior*, 11:1, 131-142.
- Reeves, Byron and J. Leighton Read. 2010. Ten ingredients of great games. Available at http://www.cedma-europe.org/newsletter%20articles/misc/Ten%20Ingredients%20of%20Great%20Games%20%28Apr%2010%29.pdf, accessed March 20, 2016.
- Richter, Ganit, Daphne R. Raban, and Sheizaf Rafaeli. 2015. Studying Gamification: The Effect of Rewards and Incentives on Motivation. In Torsten Reiners and Lincoln C. Wood (eds.), *Gamification in Education and Business*, 21-46. Switzerland:Springer International Publishing.
- Robson, Karen, Kirk Plangger, Jan H. Kietzmann, Ian McCarthy, and Leyland Pitt. 2015. Is it all a game? Understanding the principles of gamification. *Business Horizons*, 58, 411-420.

- Saar, Merike. 2017. 21. sajandi õpetaja mida õpilane temalt ootab?. *Õpetajate Leht*. January 20. Available at http://opleht.ee/2017/01/21-sajandi-opetaja-mida-opilane-temalt-ootab/, accessed February 2, 2018.
- Seaborn, Katie and Deborah I. Fels. 2015. Gamification in theory and action: A survey. *Int. J. Human-Computer Studies*, 74, 14-31.
- Simões, Jorge, Rebeca Díaz Redondo, and Ana Fernández Vilas. 2013. A social gamification framework for a K-6 learning platform. *Computers in Human Behavior*, 29:2, 345-353.
- Taruste, Tea. 2017. Uue generatsiooni ootused: mõtestatud töö, vabadus ja võrdne partnerlus. *Life Magazine*. July 25. Available at https://www.mandatumlife.ee/uue-generatsiooni-ootused-motestatud-vabadus-ja-vordne-partnerlus/, accessed February 2, 2018.
- Zichermann, Gabe. 2011. The six rules of gamification. Available at http://www.gamification.co/2011/11/29/the-six-rules-of-gamification/, accessed March 20, 2016.

APPENDICES

Appendix 1

Octalysis Gamification Framework by Yu-kai Chou



Appendix 2

Taxonomy of game design elements by level of abstraction from <u>Deterding et al.</u> (2011a, p. 12) in Seaborn and Fels (2015:17)

Level	Description	Example
Game interface design patterns	Common, successful interaction design components and design solutions for a known problem in a context, including prototypical implementations	Badge, leaderboard, level
Game design patterns and mechanics	Commonly recurring parts of the design of a game that concern gameplay	Time constraint, limited resources, turns
Game design principles and heuristics	Evaluative guidelines to approach a design problem or analyse a given design solution	Enduring play, clear goals, variety of game styles
Game models	Conceptual models of the components of games or game experience	Mechanics–Dynamics–Esthetics (MDA); challenge, fantasy, curiosity; game design atoms; Core Elements of the Gaming Experience (CEGE)
Game design methods	Game design-specific practices and processes	Playtesting, playcentric design, value conscious game design

Appendix 3

Categories of game elements by Cheong et al. 2014 (based on Werbach and Hunter, 2012)

Category	Description	Example
Dynamics	High-level aspects of game that have to be considered and managed, but not directly implemented into games.	Constraints, emotions, narrative, progression, relationships
Mechanics	Processes that engage players by moving actions forward.	Challenges, competition, cooperation, feedback, rewards
Components	Specific forms of mechanics or dynamics.	Achievements, avatars, badges, levels, points, teams

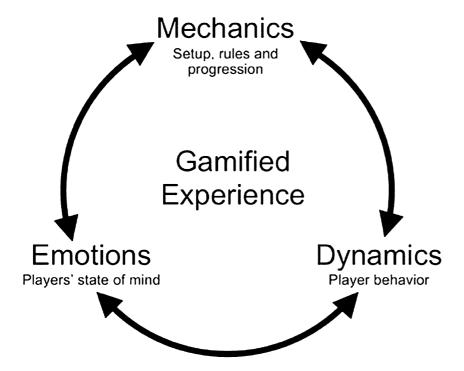
Appendix 4

Game design elements: mechanics, dynamics, and motives from Blohm and Leimeister (2013) in Seaborn and Fels (2015:19)

Game element: mechanics	Game element: dynamics	Motives
Documentation of behavior	Exploration	Intellectual curiosity
Scoring systems, badges, trophies	Collection	Achievement
Rankings	Competition	Social recognition
Ranks, levels, reputation	Acquisition of status	Social recognition
points	Collaboration	Social exchange
Group tasks	Challenge	Cognitive stimulation
Time pressure, tasks, quests	Development/ organization	Self-determination
Avatars, virtual worlds, virtual trade		

Appendix 5

MDE framework of gamification principles (Robson et al. 2015)



Appendix 6

Legend of game element terminology by Seaborn and Fels (2015:20)

Term	Definition	Alternatives
Points	Numerical units indicating progress.	Experience points; score.
Badges	Visual icons signifying achievements.	Trophies.
Leaderboards	Display of ranks for comparison.	Rankings, scoreboard.
Progression	Milestones indicating progress.	Levelling, level up.
Status	Textual monikers indicating progress.	Title, ranks.
Levels	Increasingly difficult environments.	Stage, area, world.
Rewards	Tangible, desirable items.	Incentives, prizes, gifts.
Roles	Role-playing elements of character.	Class, character.

RESÜMEE

TARTU ÜLIKOOL ANGLISTIKA OSAKOND

Liisa Liivak

Gamification in Education: Game Design Elements in the *Solutions Second Edition* EFL Textbook Set

Mängustamine hariduses: mängu elemendid inglise keele õppematerjalides *Solutions Second Edition* õpikukomplekti näitel

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Annotatsioon:

Käesoleva töö eesmärk on uurida mänguelementide esinemist ja kasutamist inglise keele õppematerjalides *Solutions Second Edition* õpikukomplekti näitel.

Töö koosneb sissejuhatusest, kahest sisupeatükist ning kokkuvõttest. Sissejuhatuses antakse ülevaade uue põlvkonnale, Z-põlvkonnale, iseloomulikest tunnustest, tuuakse välja mängustamise hariduses rakendamise potentsiaalsed kasutegurid, põhjendatakse teemavalikut ning esitatakse töö eesmärgid.

Esimene peatükk esitab mängustamise definitsiooni ning kirjeldab, kuidas mängustamist on eri valdkondades rakendatud. See sisaldab ka ülevaadet mängustamise kohta esitatud kriitikast. Peatüki viimases alaosas kirjeldatakse erinevaid mängustamise taksonoomiaid, pannakse kolme taksonoomia (Cugelman (2013), Blohm ja Leimeister (2013, Seaborn ja Fels 2015:19), Robson jt. (2015)) põhjal kokku antud töö teises peatükis kasutatav mänguelementide raamistik ning kirjeldatakse erinevusi raamistikus leiduvate sarnaste terminite vahel.

Töö teises peatükis kirjeldatakse ja analüüsitakse inglise keele õpikukomplektis *Solutions Second Edition* leiduvaid mänguelemente, keskendudes kõigepealt igale komplekti osale (õpikule, töövihikule, õpetaja raamatule) eraldi ning analüüsitakse seejärel kogu komplekti koos. Kokkuvõttes esitatakse töö põhipunktid ning analüüsi põhjal tehtud järeldused.

Analüüsist selgub, et antud õpikukomplektis sisalduvad mänguelemendid saab jagada üheteistkümne kategooria vahel seitsmeteistkümnest. Kategooriad sisaldavad mängu elemente erineval määral, nt emotsionaalse või isikliku seose elementi leidub analüüsitud materjalides arvukuselt teisest kategooriast kaks korda rohkem, vahe ülejäänud kategooriatega on veelgi suurem. Ka on komplekti eri osiste mängu elementide sisalduse määr erinev - õpetaja raamat sisaldab töövihikust ja õpikust tuntavalt rohkem elemente.

Kuigi elementide sisaldus ei ole analüüsitud materjalis tasakaalus, pakub see õpetajale piisavalt tuge mängustamise rakendamisel sisaldades erinevaid mänguelemente.

Antud töö näitab, et mänguelemendid ja mängustamine võivad esineda ka muul kui digitaalsel kujul ning et ka selline tavaline töövahend nagu õpikukomplekt pakub õpetajale tuge mängustamise rakendamisel nõudmata seejuures muude meediumite kaasamist.

Märksõnad: inglise keele didaktika, mängustamine, mängu elemendid, motivatsioon

Lihtlitsents lõputöö reprodutseerimiseks ja lõputöö üldsusele kättesaadavaks tegemiseks

Mina, Liisa Liivak

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Tartus, 05.02.2018

Liisa Liivak

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Autorsuse kinnitus

Kinnitan, et olen koostanud ise käesoleva magistritöö ning toonud korrektselt välja teiste

autorite ja toetajate panuse. Töö on koostatud lähtudes Tartu Ülikooli maailma keelte ning

kultuuride kolledži anglistika osakonna magistritöö nõuetest ning on kooskõlas heade

akadeemiliste tavadega.

05.02.2018

Liisa Liivak