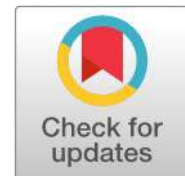


THE ESCAPE HAMLET: TEACHING SHAKESPEARE AND KEY COMPETENCES THROUGH GAMIFICATION

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Abstract

The article presents the design and outcomes of an educational experiment conducted at New Bulgarian University, in which Escape Hamlet, a gamified learning activity based on William Shakespeare's Hamlet, was developed and implemented. The experiment explores the possibility to design an educational activity that successfully combines three objectives: serious engagement with a literary text, work on the key competences for lifelong learning, and student engagement through gamification. The article first outlines the educational context of teaching Shakespeare in Bulgaria and discusses the relevance of competence-based learning. It then explains the rationale for applying gamification and describes the process of designing the game. Based on observations of playthroughs it analyzes how participants interact with the puzzles and reflect on the learning effects of the activity. The article finds that combining subject-based learning with competence-based learning is both feasible and beneficial, and that gamification has significant potential to (re)engage students with learning. The full script of the game is provided in an appendix to encourage further adaptation and use in educational contexts.

Keywords: education, pedagogy, Shakespeare, key competences, gamification

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Since 2024 New Bulgarian University in Sofia, Bulgaria has been the host of an annual festival entitled *Tracing Shakespeare*. The festival's objective is to bring together people of various qualifications who are interested in William Shakespeare and his work – university students, professors, researchers, translators, school students, teachers, psychologists, special educators, speech therapists, social workers, actors, theatre directors, theatre managers, artists, musicians – and provide a platform for them to get to know each other, exchange ideas and start new collaborations, including interdisciplinary ones.

One such collaboration between members of the languages and the theatre departments of the university took the form of an educational experiment entitled *Escape Hamlet*. It targets both school and university students and aims to integrate two learning objectives – teaching Shakespeare's *Hamlet* and teaching the eight key competences for lifelong learning. In order to create a more immersive and engaging learning experience for the students, the methods of gamification are used. The final product is an educational game which takes about 90 minutes to play and has most of the features of an escape room.

In the following pages we will discuss the project in greater detail. First, we will provide more context concerning the choice of learning objectives. Then we will elaborate on why and how we have applied the methods of gamification. We will comment on some of the playthroughs and the learning effects we have observed. Finally, a [Supplement](#) to this article features an entire script of the game free for anyone to use in their classroom or adapt to their own educational needs¹.

Teaching Shakespeare in Bulgaria

After the re-emergence of the Bulgarian state from the Ottoman Empire, Shakespeare and his works were included in the first national school curriculum. Two famous Bulgarian intellectuals, who served as ministers of education – Konstantin Velichkov and Ivan Vazov, prepared the first Bulgarian chrestomathy “or collection of selected samples from all genres of literary writing, with the addition of short biographies

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of the most renowned authors". In it they included two passages from *Hamlet* and one from *Macbeth* in their own Bulgarian translation, as well as a concise yet substantial presentation of the author and his works. The objective clarified in the preface was „for students to become aware of their belonging to European civilization, as well as develop proper moral values and good taste" (Velichkov & Vazov, 1884). During the first half of the 20th century the interest in Shakespeare increased as more of his works were translated and his dramas were staged in Bulgarian theatres.

After the communist coup in 1944, Shakespeare was not purged from the curriculum like other "bourgeois" authors. This was probably due to Karl Marx's open admiration of his work, or to Maxim Gorky's much quoted opinion that every progressive communist must read *Hamlet*, Miguel de Cervantes's *Don Quixote*, and Johann Wolfgang von Goethe's *Faust*. Nevertheless, in order to conform to the cultural agenda of the communists, both Shakespeare and his work had to be "painted red". For the author this meant that his biography had to resemble more that of Gorky – humble origins, defender of the oppressed classes, revolutionary fervour, clear purpose, readiness for self-sacrifice. For his work it meant the imposition of only one "correct" way of interpreting his works forcing themes to align with the ideas of class struggle and anti-feudalism (Shurbanov & Sokolova, 2001). Hamlet, for instance, fought a struggle that "takes on a socialist, popular character"; that when he speaks of a "sea of troubles," his words "echo the sufferings and pains of the people"; that he "merges his own pain with the people's pain"; that in the figure of the prince "the people see embodied their hopes for a better life" (Nichev et al., 1973).

Despite the pervasive ideologization of Shakespeare, islands of normality remained within the education system. The quintessential example of this is the figure of Marko Minkov (1909–1987). After graduating in classical philology in Sofia and defending a doctorate in English studies as a Humboldt scholar in Berlin, he began his work in 1933 in the newly created English Philology programme at Sofia University. He developed and for many years taught most of the courses there, and from 1951 until his retirement in 1974, headed the department. Minkov quickly established himself as a world authority in the field of English studies and Shakespeare scholarship. After the establishment of the Iron Curtain, he was repressed, isolated, and harassed, but could not be replaced in his teaching position and stubbornly continued his work. In his teaching and research, he did

not conform to the ideological framework imposed by the regime, and was instead guided solely by global academic standards, which led to many conflicts with the authorities (Shurbanov & Sokolova, 2001).

After the collapse of the communist regime in 1989 the approaches to teaching Shakespeare were gradually de-ideologized. Prominent scholars and intellectuals such as Alexander Shurbanov and Kleo Protohristova became involved in this process. For example, in the literature textbook for the 10th grade first published in 2001, Alexander Shurbanov presented different critical approaches to Hamlet – as a man suffering from melancholy, as an idealist, through Freudian theories, as a social critic (Shurbanov, Zvezdanov, Chernokozhev, 2001). At the time of writing this article, medieval and Renaissance literature is studied in the 8th grade. The latest generation of textbooks from 2017 offer teachers a rich and diverse platform of resources and tasks (e.g. Ivancheva et al., 2017). For over three and a half decades there have been no ideological restrictions on how Shakespeare is taught at universities.

Unfortunately, the larger political, economic and social aspects of Bulgaria's transition were not so straightforward. Despite the political mobilisation of democratically-minded citizens, the younger generation of communist-party functionaries, rebranded as “socialists” and in various other guises, retained a lasting control over the state. Using the siphoned funds and the secret police assets of the communist regime, they managed to prevent Bulgaria from becoming a properly functioning democracy and to perpetuate systemic corruption. This led to stalled development, a series of deep financial crises and a widening division between the haves and the have-nots. The resulting strong sense of social injustice and disillusionment was skilfully manipulated, so as to blame democracy, the market economy and generally the West that seemed to endorse them – even as the country joined NATO, the European Union, and more recently the Schengen Area and the Eurozone.

Against this backdrop, the school education sector remained unreformed and severely underfunded². Many of the more skilled professionals found better employment,

² The description of recent developments and processes in Bulgarian school education were informed by the personal experiences of the authors as well as by a series of 10 qualitative interviews with 5 unrelated schoolteachers and 5 students from different Bulgarian schools conducted by Georgi Niagolov in the spring of 2025.

while those who remained had to cater for a frivolous market. In the absence of a coherent national policy, what the market generally demanded was a socially acceptable procedure for segregating the children of more ambitious families with higher socioeconomic status from the others. The objective was to give these students better opportunity for upward mobility and migration from smaller settlements to bigger towns, from there to the capital, and from the capital to study or emigration abroad – while applying much lower standards to the education of the others. The division between the so called ‘elite’ and ‘non-elite’ schools already existed in communist times and even though some adjustments were made, the model was generally preserved. As a result now, the ‘elite’ schools provide better quality education to about 10% of the students and receive most of the attention, while education at the ‘non-elite’ ones is largely formalistic and standards are so low that it is not uncommon for students to graduate without even basic literacy and numeracy skills (OECD, 2023).

In a flash of administrative ‘ingenuity’ education authorities discovered that they could use the same standardized tests to both regulate admission to ‘elite’ schools and demonstrate to the public that minimum educational standards are met. The tests simply had to have very wide performance scales and very low passing thresholds. As a result, nearly all students manage to obtain a pass mark, but in order to get a high mark, and compete for an ‘elite’ school, students must train hard and receive expensive private tuition. Either way, given the importance of these tests to students’ lives, they inevitably determine what is important in the school curriculum. Knowledge of literature is tested at each stage of school education, but the focus is exclusively on Bulgarian literature.

This would not constitute a problem, were it not for the fact that the Bulgarian literary canon too has remained largely unreformed. It is focused on 19th-century National Revival and early 20th-century works carefully curated during communism so as to instil an eclectic mix of attitudes combining militant nationalism, mistrust of the West, Russophilia, admiration for workers and peasants, parochialism and patriarchalism. The presence of Western literature works in the school curriculum, including Shakespeare’s, holds potential to counterbalance this to some extent and give students insight into the development of universal values such as respect for human dignity and rights, freedom, democracy, justice and empathy. However, since none of this is truly prioritized by the educational system, this potential remains mostly unused.

Even though technically Shakespeare is still included in the national school curriculum, his works, together with those of other Western authors, are typically overlooked, as is the objective stated by the founding fathers of Bulgarian modern education – that students should „ become aware of their belonging to European civilization, as well as develop proper moral values and good taste“. More careful teaching of Shakespeare in Bulgaria today is limited to a handful of specialized secondary schools and a few university philology programmes – only a small fraction of whose graduates develop professionally as school teachers or university professors.

Key competences for lifelong learning

For Plato, justice was the harmonious cooperation of all citizens in order to achieve a good life together. However, they had to be prepared for their responsibilities – and this precisely was the task of education (*The Republic*). For Marcus Tullius Cicero, the study of the so-called liberal arts (*artes liberales*) was key. Through them one achieved a deep understanding of how human beings think and feel, as well as broad knowledge across all existing fields of knowledge. These abilities were necessary for the free person so that they would not become enslaved by the views of others, but would be able to defend their own convincingly, and thus achieve their goals in life (*On the Orator*). For medieval scholasticism the main function of knowledge was the correct understanding of God's word, but with the arrival of the Renaissance the focus shifted to what Giovanni Pico della Mirandola called the 'greatest miracle' – the human (*Oration on the Dignity of Man*). Several ancient texts were rediscovered and classical humanistic education (*studia humanitatis*) developed.

The main way of achieving knowledge during the Enlightenment was the collection of empirical data through systematic observation and their rational interpretation by means of the scientific method. This sharply increased humanity's understanding of the natural world but also changed the understanding of human nature. People are free, unburdened by their origin, and possess natural rights. In this context Jean-Jacques Rousseau argued that students, like little natural scientists, confront the world and by the principle of trial and error empirically discover whatever it is they need to know (*Emile, or On Education*). When, against the background of the accelerating Industrial Revolution, at the very beginning of the nineteenth century universal,

compulsory, state school education was introduced for the first time in Prussia, Wilhelm von Humboldt believed that there was a certain type of general education and cultivation of the personality (*Bildung*) which everyone must undergo before developing one or another professional skill. According to John Dewey, the ability for critical thinking is of key importance – teaching students to memorize whatever you tell them without questioning it is much easier, but this, of course, is only an imitation of education. True education is a moral task for teachers. If they fail to prepare future citizens to assume responsibility for the sequence of rational choices on which the quality of not only their own lives but also that of society as a whole depends, democracy cannot function properly (*Democracy and Education*) (see Curren, 2003).

During the 1960s, however, it became clear that educational systems are not successful in achieving these lofty goals systemically. In the usual case schools were organized according to the industrial model of the factory – the school day proceeded according to a programme predetermined and imposed from above, the bell signalled the beginning and end of lessons, knowledge was divided into different subjects, they were taught by different teachers, many of whom did not have high qualification – it was enough for them to be able to follow curricula written by more highly qualified specialists.

Thus, educational systems largely prepared students for employment in industrial production, yet they proved insufficiently capable of preparing them for the future. The industrial era was gradually giving way to a post-industrial one. This emerging socio-economic order was characterized by the increasing centrality of service production rather than the manufacture of goods; the transformation of knowledge into a key form of capital; and the growing importance of innovation and new ideas as primary drivers of economic development. Under conditions of globalization and the increasing automation of production, economic value shifted away from manual labour toward engineers, researchers, and individuals engaged in creative professions. At the same time, the information sciences, as well as the scientific study of behaviour and mental processes, expanded significantly and found increasingly wide-ranging applications.

In this context, by the early 1970s it had become evident that a substantial portion of the learning process was only formalistic and did not result in meaningful learning; that access to high-quality education remained largely restricted to children from families

with higher socioeconomic status; and that while science was advancing rapidly, educational systems were failing to keep pace (Faure, 1972). It also became clear that, even where basic literacy rates statistically approached universality, a significant proportion of school graduates remained functionally illiterate. Importantly, even at this stage the concept of ‘functional literacy’ was not limited to the ability to read labels and instructions – rather, it was understood as the capacity to use language for “socio-economic and cultural activities,” as well as “as a means for achieving greater personal freedom and personal development” (UNESCO, 1978).

Meanwhile, analyses were carried out in the United States which showed that until that moment policies in the field of education had been directed mainly toward controlling its content and the organization of the learning process. Experts recommend moving toward policies focused on learning outcomes. The concept that was used for this type of policy is “competency-based education” (Nodine, 2015). Three main characteristics define this approach: i) learning outcomes (competencies) are described in detail; ii) the degree of their achievement is assessed and, if they are not achieved, the reasons are sought and responsibility is borne; and iii) the procedures through which institutions achieve the results (competencies) are not controlled and standardized – they are adapted and personalized according to the needs of the learners.

Alongside UNESCO, other international organizations began rethinking education so that it would become more adequate to the future needs of the labour market and society at large – for example the Council of Europe, the World Economic Forum, the Organisation for Economic Co-operation and Development, the World Bank, and the US Partnership for 21st Century Learning. As a result, a number of frameworks of learning outcomes were developed, which shared the same rationale, but differed slightly in terms of terminology and structure.

During the 1980s, a number of countries initiated fundamental reforms of their educational systems, including Finland, Ireland, Scotland, several U.S. states and Canadian provinces, Australia, South Korea, and Singapore. By the beginning of the new century, the first results had already become evident. These developments demonstrated clearly that processes of globalization, climate change, and above all rapid technological transformation were advancing at such a pace, and producing such profound changes in

the lives of individuals, that educational systems failing to undergo modernization were falling irreversibly behind. By this time, countries such as Germany, the Netherlands, several countries in Eastern and Central Europe, Japan, China, and a number of Latin American countries had also joined the process of educational modernization.

In 2006 the Council of the European Union recommended, and in 2018 reaffirmed, its own framework of 'key competences for lifelong learning'. The framework includes the following competences: literacy competence; multilingual competence; mathematical competence and competence in science, technology and engineering; digital competence; personal, social and learning to learn competence; citizenship competence; entrepreneurship competence; and cultural awareness and expression competence. There are also 'horizontal' learning outcomes that draw on elements from several or all of these competences. These outcomes are typically articulated either as literacies (e.g., language literacy, media literacy, digital literacy, numeracy) or as transversal skills (e.g., critical thinking, problem-solving, teamwork).

In this context, the concept of 'competence' refers to a complex learning outcome that integrates specific knowledge, skills, and attitudes, which may be described in detail across different stages of education. A 'competence framework' denotes a structured set of interrelated competences, each of which holds equal significance in relation to the others. The notion of 'key' (basic, foundational, or fundamental) reflects the idea that has developed in Western philosophy of education, according to which there is a certain body of learning that everybody must acquire in order to develop adequately as an individual and member of a properly functioning society. The concept of 'lifelong learning', in turn, refers to Faure's theory that the successful societies of the future will be 'learning societies', whose citizens continue to learn and to pursue self-actualization throughout the course of their lives. The framework of key competences for lifelong learning may be further complemented by professional and other more specialized competences.

In 2016, a full decade after the initial recommendation was made by the Council of the European Union, a new legislative framework regulating school education was adopted in Bulgaria. It declares that developing the key competences for lifelong learning is the main goal of the national school curriculum. On closer inspection, however, it is visible that this legislative framework does not clarify what key competences really are,

how the new competence-based approach to education is to be combined with the traditional subject-centred one, what students' learning outcomes in terms of developing competences should be for each stage of school education, how this is to be measured, who should be responsible for this and what such responsibility should entail. Without this clarification 'developing key competences' remains yet another piece of 'policy newspeak' without real effect on the ground. A coherent national policy for developing key competences beyond school education – in higher education or lifelong learning – has so far not been considered.

From the vantage point of 2026, another decade later, the consequences, at the systemic level, are there to be seen. In PISA 2022, Bulgarian students ranked last in mathematics and second-to-last in reading among EU countries, with more than half performing below the minimum proficiency level (OECD, 2023). Rather than compensating for social inequalities, the education system often reproduces them: socioeconomic status remains a powerful predictor of student achievement (European Commission, 2024). The problem extends beyond academic knowledge. Bulgaria ranks last in the Media Literacy Index 2023, indicating high vulnerability to misinformation (Lessenski, 2023), and remains among the lowest-ranking EU countries in basic digital skills (Eurostat, 2023). OECD surveys further show relatively low levels of key social and emotional skills among students – competences that are essential for well-being, responsible decision-making, and effective participation in democratic society (OECD, 2021).

Why gamification?

If most Bulgarian students are not versed in universal human values through their literary education, nor do they develop key competences to prepare for the future – then what do they learn during the twelve years they spend at school? The short answer to this question is – they learn how to jump through the hoops. Regardless of whether they have secured a place in one of the few 'elite' schools, or have ended up somewhere else, they invariably become aware of the system attempting to 'discipline' them. They have to learn to obey rules they not always understand, to sit still and listen to the teacher for hours, to memorize and reproduce information they may not be interested in, even to use the toilet

only when they are allowed. They have to learn that going to school is hard work – a sacrifice in the name of unclear future benefits.

To some extent, this too is a remnant of communist times. A distinctive feature of the regime was the belief that it was the responsibility of the state, not of the individual or the family, to ‘form’ the character of its citizens. Schools had a crucial role in this process which was called ‘upbringing’ and kept theoretically distinct from ‘education’. The idea was to shape young people’s knowledge and understanding of the world by inculcating officially prescribed attitudes, values, and habits intended to make them good, hardworking, and loyal members of socialist society. The wave of de-ideologization and liberalization that started in the 1990s limited the authority of schools, but there is still a very strong sense in the teaching profession that this was a mistake, there is also a continuing demand for more power to impose ‘disciplinary’ sanctions on students and sometimes even on their parents.

An extravagant recent initiative, seriously considered and coming close to legislative adoption, concerned the introduction of compulsory religious education in all years of schooling. The publicly presented rationale was that due to the detrimental influence of a ‘globalized’ and ‘all-too-liberal’ world full of ‘dehumanizing’ technologies and social media, students fail to develop the right kind of attitudes, values, and virtues – and that this can be remedied by religious instruction. This is a classic example of looking for a magic (or should we say ‘divine’) solution to a complex systemic problem. Of course, students should develop attitudes and values that make themselves and the social fabric they partake of stronger. Of course, they should develop the digital and socio-emotional skills they need to resist the bad influences of algorithms and AI. The only way to do this, however, is through better education, more focused on their wellbeing, not through religious indoctrination.

In a regulatory framework that does not allow corporal punishment, one of the main instruments for ‘disciplining’ and ‘bringing up’ students is psychological manipulation. Some of the most common techniques include psychological coercion, guilt induction, emotional blackmail, shaming and gaslighting. As a result, many students develop a negative attitude not only to the person who uses these techniques, but to the subject he or she teaches, the school, the whole system, even learning in general. Some of

them respond through overt forms of rebellion or aggression, but the majority withdraw psychologically, constructing an internal barrier that distances them from whatever is taking place in the classroom. This distancing becomes habitual and poses a significant problem when trying to truly engage them with formal education in the future (Yarrow, E., & Hedges, 2021).

At the same time, children are naturally curious, energetic, and inclined toward exploration and social interaction. When they become psychologically disengaged from school, they tend to seek alternative environments where they can socialize, exchange information, develop their identities, receive validation, and experience enjoyment. In earlier generations, when they were not at school children generally had two principal options – reading books at home or playing outdoors with peers. In contemporary societies unsupervised outdoor activity for children under the age of twelve is often restricted. At the same time, the rapid expansion of mass communication and information technologies has created increasingly attractive alternatives to reading. Children first began spending significant amounts of time watching television, later shifted toward computer games and, more recently, social media as alternative social and learning environments.

The systemic solution to the problems outlined so far requires a comprehensive reform of the Bulgarian education system. In its absence, however, when trying to re-engage students with learning activities, educators resort to certain palliative measures which are proudly referred to as ‘innovative teaching methods’. A very effective one, because it connects directly to learners’ alternative social and learning environments, is gamification. According to one of the foremost authorities on this subject, Karl Kapp, “[g]amification is the careful and considered integration of game characteristics, aesthetics and mechanics into a non-game context to promote change in behavior. It is most often used to motivate and engage people” (Kapp, 2012).

Since the 1960s, educational theory has increasingly recognized the importance of play in early childhood education. Influential theorists such as Jean Piaget argued that through free play with objects children actively explore their environment and construct knowledge by integrating new experiences into existing cognitive structures, a process he described as assimilation (Piaget, 1962). Lev Vygotsky similarly emphasized the

developmental role of play, suggesting that it creates a supportive context in which children can perform beyond their current abilities within what he termed the 'zone of proximal development' (Vygotsky, 1978). Contemporary educational research continues to build on these foundational ideas, exploring how structured and unstructured play can support cognitive, social, and emotional development. As a result, play-based learning approaches are increasingly incorporated into early childhood education practices.

Marc Prensky, one of the major proponents of game-based learning, argues that play and games have significant educational potential not only for young children but also for school students, university learners, and adults (Prensky, 2001). In recent years, other scholars have further explored these ideas, identifying practices that make educational games effective. Successful learning games tend to be voluntary, intrinsically motivating, and approached with a positive attitude. They emphasize the process of engagement rather than only the outcome and often rely on creativity, problem-solving, and active participation. Rules and structures may emerge through interaction among players, while mistakes are treated as opportunities for learning rather than failure. Continuous challenges, collaboration, and team-based interaction sustain motivation. Importantly, players should engage primarily for enjoyment, as the educational benefits of play often emerge most effectively as a natural by-product of the gaming experience (Kapp, 2012, 2014).

Another theory relevant to the gamification of learning is Mihaly Csikszentmihalyi's research on 'optimal experience'. In seeking to understand human happiness, Csikszentmihalyi discovered a phenomenon he called 'flow'. It is a state of deep engagement in which individuals become fully absorbed in an activity performed for its own sake. Although not always physically pleasant, this state represents an optimal psychological experience in which people voluntarily stretch their abilities to accomplish challenging and meaningful goals, such as mastering a complex musical piece or achieving an athletic milestone. Csikszentmihalyi found that happiness often emerges as an unintended by-product of such engagement. Importantly, flow can be intentionally supported through design. Across different contexts, it arises when individuals pursue a clear goal while their skills develop in balance with increasing levels of challenge. If skills exceed the challenge, boredom occurs; if the challenge exceeds skills, anxiety results. Effective learning design therefore requires meaningful goals, gradually increasing

difficulty, and adequate support to help learners develop their abilities alongside rising challenges (Csikszentmihalyi, 1990).

Designing the game

In this context, in 2025, on the eve of the second issue of the *Tracing Shakespeare* festival at New Bulgarian University, we, an interdisciplinary team of university professors, decided to conduct an educational experiment. We wanted to test whether it was possible to design an educational activity that could successfully combine three objectives: i) serious consideration of a play by William Shakespeare; ii) work on the key competence for lifelong learning; and iii) engagement through gamification. If this is possible on a small scale, we thought, then it should be possible to scale it up to the level of a course, programme, institution – even to the level of a whole curriculum. We were also inspired by a recent publication by our colleague Hristo Chukurliev in which he tells how he designed an escape-room-type learning scenario for his students in a museum (Chukurliev, 2024).

In our case, the participants would include school students, teachers, university students, professors as well as any other member of the audiences attending the festival. Based on this we selected the play. We opted for the most familiar Shakespeare play in Bulgaria – *Hamlet* – hoping that at least some of the participants will have studied it beforehand or seen a production in the theatre. We expected both Bulgarian and international participants, so we had to prepare two language versions – one in Bulgarian and another in English. For the Bulgarian version we used the most recent translation by Alexander Shurbanov published in 2016 in an interleaved bilingual edition (Shakespeare, 2016).

The duration of the activity had to be equivalent to a standard 90-minute university session so that it could fit into the festival programme. We also decided to extend the meaning of “room” in “escape room” to include the entire university campus. Since the key competences are equally important, we wondered whether it would be possible to divide the time evenly and allocate some to each of them. We reasoned that if we devoted ten minutes to each of the eight competences, this would leave participants another ten minutes to move from one location to another. This meant that we had to design eight tasks – one for each key competence. We also thought that the competences

could be thematically linked to the locations; for example, the task related to cultural awareness and expression could be situated in the university gallery.

The first major challenge was how to connect the play meaningfully with the framework of key competences. The plot follows a linear structure, whereas the competences are interrelated and can be approached in any order. We therefore had to identify eight chronologically consecutive and dramatically significant moments in the play, each of which could be connected with one of the key competences. Shakespeare's *Hamlet* is thematically so rich that this proved less difficult than we had initially expected. The first task connects the moment in Act II, Scene 2 when Hamlet decides to test whether the ghost is telling the truth with digital competence and the activity of fact-checking using the internet. The second connects the moment in Act II, Scene 2 when Hamlet engages in a multilayered conversation with Rosencrantz and Guildenstern with the personal, social and learning to learn competence and the activity of social-emotional mapping. The third connects the moments in Act II, Scene 2 and Act III, Scene 2, when the play-within-the-play is prepared and performed, with the cultural awareness and expression competence and the activity of looking for clues in a picture. The fourth connects the famous "To be, or not to be" soliloquy in Act III, Scene 1 with the entrepreneurship competence and the exploration of opportunities for a more favourable outcome to the events of the play. The fifth connects the moment in Act III, Scene 4, when Hamlet confronts his mother, Gertrude, in her chamber, with multilingual competence and a focus on translation. The sixth connects the famous "How all occasions do inform against me" soliloquy in Act IV, Scene 4 with citizenship competence and a consideration of Hamlet's possible courses of political action from a contemporary perspective. The seventh connects Hamlet's conversation with the gravediggers in Act V, Scene 1 with mathematical competence and competence in science, technology and engineering. The eighth and final task connects the final scene (Act V, Scene 2) with literacy competence and places participants in Horatio's shoes as they reconstruct the story of Hamlet.

The second major challenge was to design the tricky part of the tasks – the puzzles. In this stage of the work we found Paige Lyman's *The Do-It-Yourself Escape Room Book* extremely useful (Lyman, 2021). We also tried to connect the puzzles thematically with the locations and, as far as possible, with both the competences and the Shakespearean moments. As we did not have a dedicated budget, we tried to keep the costs to a minimum.

For the first puzzle we set up a virtual safe box on one of the machines in a university computer room that had to be unlocked digitally. Participants then worked in a social space on campus to piece together an emotional map. Next they went to the gallery and examined Albrecht Dürer's engraving *Melencolia I* in order to find a hidden clue. They then solved a textual puzzle that produced a sequence of capitalised letters pointing to the next location—the library. Next participants compared an original passage from the play with its Bulgarian translation, identified an English phrase, and determined the rhetorical figure it uses. They then sorted political behaviours to reveal a hidden word. After that they went to a biology lab, where they had to differentiate between conspiracy theories, superstitions, religious beliefs and scientific truths. At the final location participants were locked in and had to retrieve a key from a box by solving the last puzzle, which required them to reconstruct the story of *Hamlet* from pieces of text, some of which were redundant.

Later, when we had to move the game to other locations and even bring it to a school, we discovered that it was possible to adapt the puzzles without changing the educational content of the tasks. From a technical standpoint, each task includes a verbal instruction that participants must read or hear in order to solve the puzzle and advance in the game. These instructions combine information about Shakespeare's play with information about the respective competence. They determine the activity in which participants apply this knowledge to the puzzle and reflect on it. This structure can be preserved regardless of whether the puzzle is textual, e.g. detecting hidden words to find the next location, numerical, e.g. working out a combination of numbers to unlock a padlock, or something else. We had to test and modify the puzzles to achieve the right level of difficulty. We did not want to make them too hard, as participants could become discouraged or take too long to solve them, nor too easy, in which case participants could lose interest.

From a visual and atmospheric perspective, the game benefited from two factors: that it was set on the university campus and that it was developed in the context of a festival. The university setting contributed to the atmosphere of the game because it enabled us to place participants in a number of interesting spaces – a hi-tech computer room, a comfortable social space, a gallery, a library, a bookshop, a museum, a biology lab, and a theatre room. The fact that the production of the game was part of a festival meant

that we could use a small budget for printed materials and access the university graphic design lab. In this way, we were able to mark and decorate the locations with specially designed posters and stickers, and we could also print specially designed maps of the campus for participants. We were also able to purchase props such as boxes, padlocks, and a plastic human skull. All this contributed to participants' engagement.

Playing the game

To ensure that participants would not get lost on campus and that playing the game would not take longer than 120 minutes, we decided that during each playing session each group of participants would be accompanied by a 'gamemaster' – one of us or a previously briefed volunteer student. In this way, we could also observe first-hand how participants experienced and dealt with each of the tasks. In this section, we share our most important observations, with the caveat that they are subjective and context dependent. Therefore, we hesitate to claim that the effects we have observed are a direct consequence of the game but suggest that they are worth investigating further.

The first thing we observed was the fact that participants, regardless of their age, approached the topic of Shakespeare's *Hamlet* with a mixture of awe and fear. Even if they knew little about the author and the play – which was, of course, not the case for everyone – they were aware that *Hamlet* is a great world classic and therefore assumed that it must be very difficult. It was clear that they struggled to imagine how they could have fun with it. There was also a faint sense of shame and guilt among some participants, who had probably not read the play or did not remember the interpretations they had been spoon-fed in school.

When participants were confronted with the first puzzle, they quickly understood that they would be much stronger if they collaborated against the game. Every group had its own dynamic, but in all of them participants organized themselves in some way – someone would read the instructions, others would look for clues, someone would be good with mathematical puzzles, and another with language-based ones. In order to maintain coordination within the group, they communicated with each other, which indicated that everyone was thinking about the instructions.

Another thing that became clear when participants were confronted with the puzzles was that gamification did actually work. They quickly forgot about their initial worries and engaged with the game. They found different ways to solve the puzzles, some of which had not been envisaged at the level of game design. Interestingly, they wanted not only to win, but also to do it honourably. When they got stuck on a puzzle, someone would inevitably suggest using an AI tool, which is something students often secretly do in the classroom nowadays. However, the group would always dismiss this idea, arguing that it would “spoil the fun” of the whole activity.

When asked afterwards about their experience, most participants reported that they enjoyed playing the game and would recommend it to others. They expressed regret that more of the classes they had attended were not organized in this way. When asked specifically about Shakespeare’s *Hamlet*, they said that they felt they knew more about it and that they were more likely to (re)read the play or choose to see it performed on stage or on screen. Concerning the key competences for lifelong learning, participants reflected that they did not remember having been explicitly taught any knowledge, skills, or attitudes connected with them. Nevertheless, they acknowledged that what they learned about them during the game was useful and relevant to their educational, professional and social lives.

Conclusion

In this article, we have established the context of an educational experiment recently conducted at New Bulgarian University, explained the reasons that motivated us to undertake it, and described in greater detail both the design stage and our observations of its effects on participants. In this experiment, we aimed to test whether it was possible to design, on a small scale, an educational activity that could successfully combine the following objectives: (i) serious engagement with a play by William Shakespeare; (ii) work on the key competences for lifelong learning; and (iii) engagement through gamification. Based on our discussion, we can conclude that this is possible and that it has a positive effect on participants.

Furthermore, based on our experience of designing the educational game *Escape Hamlet*, we have identified two efforts that merit separate consideration: combining subject-based learning with competence-based learning, and using gamification as a

method to (re)engage students with learning. Our experience suggests that each of these objectives can be successfully achieved and they can also be combined with one another. In the context of 21st-century education, we believe that the integration of subject-based and competence-based learning should become the norm across courses, programmes, syllabi, and curricula at all stages of education, including school, university, and lifelong learning. At the same time, our experiment also confirms that gamification has considerable potential to (re)engage students with learning. Given that this potential has so far been only rarely explored in Bulgaria, we argue that gamified approaches should be used more widely across all levels of education.

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