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*Стаття надійшла до редакції 17. 02. 2019 р.  
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#### THE ROLE OF GAMIFICATION IN STUDENTS' ENGAGEMENT IN THE CONTEXT OF HIGHER EDUCATION

**Formulation and justification of the relevance of the problem.** Today's students of higher education grew up with digital technologies and live in the technological environment. They are the Digital Generation (D-Generation) who has developed the inductive learning style and tends to be knowledge makers. Thus, teachers are facing new challenges and have to solve important issues related to the adaptation of the learning process towards students' needs, preferences and requirements. Teachers have to use different teaching methods and approaches that allow students to be active participants with strong motivation and engagement to their own learning.

Modern pedagogical paradigms and trends in education, reinforced by the use of ICT (information and communication technology), create prerequisites for use of new approaches and techniques in order to implement active learning. Gamification in education is one of these techniques used to effectively improve the existing teaching-learning process and to engage students in it.

**Analysis of recent research and publications.** In the field of education, the concept of gamification has been a topic of intensive study over the past decade. Dodero et al. state that in its most common acceptation, gamification uses game-based elements,

mechanics, aesthetics and game thinking in a non-game context in order to engage people in a non-game activity to motivate action, promote learning, and solve problems [4, 6]. As Kapp argues «an explicit goal of gamification is to gain a person's attention and to involve him or her in the process you have created. Engagement of an individual is a primary focus of gamification» [9]. Among other authors who worked in this area are Deterding, Dixon, Khaled, Nacke, Veltsos, Kiryakova, Stott, Neustaedter, Seaborn, Fels and others. The majority of researchers emphasize the advantages of gamification in the teaching-learning process as it improves the existing tutorial system and develops the student's learning autonomy [10].

**The purpose of the article** is to study and present the nature and benefits of gamification as a modern pedagogical technique to engage students in the teaching-learning process.

**The main material of the study.** The definition of the notion engagement is rather multidimensional and controversial as the notion can be applied in the wide range of contexts. Researchers state that student engagement is crucial for learning and can be achieved for all learners. In this article, we limit our context to teacher-student(s) or student(s)-student(s) interactions in the classroom of higher education via the computer-mediated mode. Philp et al. assert that engagement is a state of heightened attention, comprehension and involvement [13]. The notion engagement is recognized through the interdependence of cognitive, emotional, behavioral or social dimensions [13]. Cognitive dimension is characterized by sustained attention, constructive thinking, concentration on the task fulfilment, cognitively focused participation in the learning process as students attempt to reach the highest level of comprehension on a specific area of study. The indicators of positively engaged students are students' positive reactions (enthusiasm, interest, and enjoyment) while performing the in-class activities. Students' emotional disengagement involves boredom, anxiety, frustration, reluctance to participate in the interaction. Behavioral or social dimension is characterized by students' willingness to be involved in curricular and extracurricular activities, affiliation to teachers and peers [13].

Da Rocha Seixas et al. point out the following students' engagement indicators that can be observed in numerous studies of scholars and give the general idea of the notion «student's engagement»: autonomy (the ability to study at home independently and to make decisions without the teacher's intervention); performance of in-classroom activities; the student's friendly interactions with groupmates and teachers; timely delivery of the activities; participation in in-class discussions or explanations of the subject; the

student's collaboration with groupmates, even if it is not teamwork; high initiative while cooperating with groupmates during teamwork; demonstration of intellectual curiosity by questioning the teacher about the studied subjects; organization of the environment (student maintains the classroom always clean and organized); enjoyment and satisfaction (the student performs the activities because he/she considers them fun to do) [3].

Researchers argue gamification in education can be identified by four essential features:

1. **Freedom to Fail.** Game design often gives students multiple attempts to restart a game at the most recent «checkpoint» if they were unsuccessful in completion of the task. It shifts the focus from the final results to the process of learning and provides students' with on-going self-assessment. Students are more aware of the consequences of their bad-reasoned solutions and tend to explore content more thoroughly and produce more creative decisions.

2. **Rapid Feedback.** Rapid feedback is crucial in the learning process as it helps the student's achievement of the task. Students are promptly apprised of their progress in the game with information about points, lives, and levels. Thus, students apply new skills and retain knowledge to accomplish a purpose and produce the intended results. The teacher's response to the student's progress in the game activity is also of decisive importance with respect to the expected learner's outcome. Teachers monitor students' progress and accommodate students with prior experience giving them advice, assigning students to adequate tasks or offering multiple ways to reach the goal.

3. **Progression.** Progression of students is linked to scaffolded instruction, the game dynamics of «the interest curve», «just in time teaching».

Scaffolded instruction is based on L. Vygotsky's theory of child's «zone of proximal development» – the area between what the child can accomplish without the assistance of the adult and the level the same child can achieve having been aided [20].

In modern pedagogy scaffolded instruction is also applied to gamification. Students as players move from the simplest level (the one where the teacher is responsible for the student's performance) to the most complicated level (the one where the student assumes the most of responsibility for achievement and become an independent doer).

Beed at al. consider five steps of scaffolding, such as [1]:

1. **Teacher modeling.** The teacher performs the task explaining to the student how to accomplish it.

2. **Inviting students' performance.** The teacher «frames» the future activity of the student that means the teacher models the student's

performance of the task, gives him/her a strategy to do it and provides the student support.

3. Cueing specific elements. The student performs the task guided by the teacher's instructions who is identifying the key elements of the strategy.

4. Cueing specific strategies. The teacher names the strategy of performance and the student fulfils the task alone.

5. Providing general cues. The teacher encourages the student to perform the task with a request.

«Just in time» teaching equips students with the necessary knowledge to succeed in the game. «Just in time» teaching is a modern pedagogical strategy based on the Web pre-instruction assignments, student(s)-student(s) and teacher-student(s) interactions. To meet the requirements of the students and prepare them better for in-class interaction and the dynamics of the game, the teacher sends students the Web assignments and then collects students' responses prior to a lesson. As Novak states, «...their responses form the foundation on which they eventually build a more complete understanding, possibly approaching that of an expert on the subject» [12, p. 64]. «Just in time» teaching occurs in a classroom and benefits all parties, students and teachers. The strategy facilitates students' engagement in the game and their reflection on the learning process as they synthesize and apply prior and new knowledge. Teachers improve students' performance by correcting their mistakes, modelling how to learn from mistakes, commenting students' on-going progress, fostering cooperation and collaboration between students and teachers.

«The interest curve» demonstrates students' attention to the game (the high and low points) and prompts the teacher how to sequence the events to retain students' engagement and hold their attention.

4. Storytelling and narrative. Games use narrative to provide students with experimental knowledge that involves problem-oriented experiences [2]. Students are engaged in the imaginary world that can closely mirror their future professional activity ranging from case studies to simulations and presents students with problems to solve rather than lists of facts.

According to Robson et al., in order to create engaging experiences through game features on educational context, it is necessary to consider three gamification principles of the game functioning: game mechanics, game dynamics, and aesthetics.

In game design, «aesthetics» describes the desirable emotional responses (e.g., fantasy, submission, fellowship, discovery) evoked in players when they interact with the game. Game dynamics or game flow helps players to distract

from their routine life and problems as participants concentrate on their progress from one game mission to the next one(s) and they can lose their self-consciousness, stop worrying about other things, feel enjoyment and happiness. Thus, gamification provides positive experiences for engagement and enjoyment.

Game mechanics is the relationship between different game-based elements that makes any game engaging [3].

Scholars indicate that the most common game based elements are the following [3, 9, 10]: abstraction of concepts and reality that reduces the time to grasp the concepts as extraneous factors are removed; points, scores that are used to encourage competition and track individual progress; levels that demonstrate the player's status; reward structure that comprises challenges, trophies, badges/medals, and accomplishments that represent the player's achieved goals and a rewarding system of the game; virtual goods that are one of the incentives that the player can use to increase his/her status and prestige and to create his/her your own identity; classification table, ranking, score table that present and rank the player's progress and can increase completion among players; self-expression required by some people to express personality; conflict, competition, cooperation are linked to the player's (dis)satisfaction; instant feedback that builds engagement and designed to evoke the correct thoughts, behavior, actions.

There are a variety of ways to introduce gamification in higher education to make learning more engaging: the game-based rewarding system, video games integration in the class curriculum; competition, and other pedagogical techniques, such as leveling up [5, 11].

The game-based rewarding system. For each assignment completed, students are awarded with points and badges or grades to track progress and encourage perseverance. Students' letter grades are determined by the amount of points they accumulated at the end of the course, in other words, by how much they have accomplished. It is also necessary to implement a class-wide rewards system; encourage a spirit of familiarity and trust between students by setting up a rewards system where students achieve something as a team. That way, students are working to master the material together instead of competing, and the highest-achieving students will help those around them.

Educational video games integration in the class curriculum. Video games fulfill the following students' needs: the need to be a decision-maker, the need for competency and the need for relationships. Many video games are focused on the concept of teamwork and cooperation that develops a student's social responsibility as he/she does not want to let the team members down. Games also allow the

curiosity and the learning to continue after classes. Students are given a sense of action in games, they control the choices they make, and the more actions students have, the better students do. Immediate feedback and small rewards are external motivators.

Competition. Everyone wants to see his or her name on the leader board. It made students demonstrate their understanding of a problem and demonstrate their knowledge of the material and participate without having to raise their hands.

In classroom leveling up students slowly build their intellectual strength. In a game, they level up. It's a clear promotion, and the recognition they receive for achieving the next level which is extremely rewarding. In most games, higher levels are reached by accomplishing tasks that reward a player with experience points.

There are many tools for gamification. Some of them are web-based (e.g., cloud services) and do not require installation of special software and allow access at any time and from any location. Among the most popular gamification tools are: Socrative, Kahoot!, FlipQuiz, Duolingo, Ribbon Hero, ClassDojo and Goalbook. BadgeOS™ and its add-on BadgeStack, a free plugin to WordPress that automatically creates different achievement types and pages needed to set up badging system. Mozilla Open Badges Project is a project which goal is to enable the identification and recognition of acquired knowledge and skills of students outside the classroom – results of informal learning. Via Mozilla's Open Badges project anyone can issue wins and display badges through shared technical infrastructure (Mozilla Open Badges).

Moodle is one of the most popular learning platforms that allow teachers to manage online learning. Moodle is among those LMS which develop and offer features aiming to facilitate gamification of the learning process. Some of Moodle gamification capabilities are: user's picture/avatar; visibility of the students' progress; display of quiz results; levels, feedback, badges and leader board. There are different ways to implement gamification in Moodle. The system features – automatic data processing and tracking of students' progress along with completion tracking and conditional activities are the base for gamifying it [8].

However, gamification has received its fair share of criticism. The opponents of gamification in education argue that students should be engaged in the teaching-learning process by self-motivation, not by some external tool. It is also mentioned that games stir a little competition among students or that students focus more on the game rather than the course matter [7]. These criticisms have merit. There are a lot of gamification efforts leading to those outcomes.

However, those games are believed to be badly designed, not because gamification or using games in education is inherently a bad practice.

**Conclusions and prospects for further researches of directions.** Gamification is one of the most effective pedagogical techniques that can be implemented in the teaching-learning process as it enhances students' engagement and makes positive changes in students' behavior and attitude towards learning. The results of the change have bilateral nature – they can affect positively students' learning outcomes and create conditions for an effective learning process.

Further research is aimed at the study of the effectiveness of using gamification for the foreign language learning.

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#### ЗМІСТ ПРОФЕСІЙНО-ОРІЄНТОВАНОЇ ЛІНГВІСТИЧНОЇ КОМПЕТЕНТНОСТІ ВЧИТЕЛЯ ІНОЗЕМНОЇ МОВИ

**Постановка та обґрунтування актуальності проблеми.** З метою забезпечення ефективної підготовки педагогічних кадрів постають нові вимоги до професійної іншомовної освіти, а саме щодо високого загальнокультурного, міжкультурного та філологічного рівня майбутнього фахівця. Дослідження шляхів реалізації професійної іншомовної освіти філологів в умовах інтеграції до світового освітнього простору передбачає розгляд цієї проблеми з точок зору різних наук та їхніх галузей: лінгвістики, лінгвокультурології, педагогіки (у т.ч. порівняльної педагогіки), методики викладання іноземних мов, психології, соціології, філософії. Результати професійної підготовки вчителя-філолога – це оволодіння системою загальних і професійно-орієнтованих комунікативних мовленнєвих

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компетентностей. Формування і удосконалення іншомовної комунікативної компетентності в цілому та її складових зокрема – важлива теоретична проблема та першочергове практичне завдання. Особливу увагу, на нашу думку, заслуговує ґрунтовний аналіз структури лінгвістичної компетентності як базового елемента іншомовної комунікативної компетентності.

**Аналіз останніх досліджень і публікацій.** Увага наукової педагогічної думки наприкінці ХХ – початку ХХІ ст. зосереджується на визначенні поняття комунікативної компетенції та описі його параметрів (Л. Ананьєва, Л. Біркуц, О. Волобуєва, М. Китайгородська, С. Козак, С. Мельник, Є. Пассов, Л. Бахман, К. Кін, С. Савіньон, М. Свейн, Р. Уайт, Д. Хаймз, Н. Хомський, Д. Шейлз). Так, Д. Хаймз у