



## Flexibility as a Pedagogical Challenge: “Teaching-Through-Play” or Edutainment Practices for Computer Science Students

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### Abstract

*When comparing the cohort of today's students with previous generations, we can observe some cognitive changes that have probably been caused by digitalization processes in society. The contemporary study environment is being modernized at a rapidly increasing pace; hence, there is a crucial need for new teaching methods that should be applied to facilitate the successful interaction between students and lecturers. In the Baltics, the age gap between these two categories is conspicuous that has been proved statistically. Challenges occur when teaching well-versed IT students, since lecturers are expected to adjust their own cognitive competences to the situational demands of the contemporary classroom. The aim of this research is to examine edutainment as a high-end teaching concept that helps to enhance students' motivation and to eliminate the possible mental gap between teachers and scholars. Various icebreaking practices, such as interactive discussions and, most importantly, didactic games have been implemented at Riga Technical University to accomplish this task. The factor that is particularly noteworthy here is the widespread stereotypical interpretation of edutainment; whereby the latter is understood solely as a deliberate simplification of the study process. In fact, edutainment or 'learning through play approach' has always been deeply entwined with the main postulates of humanistic psychology. Edutainment teaching aims at delicate yet persistent deliverance of hidden potentials and preferences of a scholar. For instance, the survey based on students' feedback has shown that there is vivid interconnection between the gender of a scholar and their attitude to the elements of competition in didactic games. Around 86% of male respondents felt enthusiastic about classroom activities, which are based on competition principles; whereas only 35% of females gave positive feedback. The reason of this distinction has been best formulated by one of these female students, who described competitions in the classroom as 'empathy lacking' activities (she insisted that "empathy is part of female nature"). Thus, in the classroom situation, edutainment has appeared to be a sociopsychological indicator that reveals some individual traits of a student and helps the lecturer to choose an appropriate teaching method to develop their competences.*

*Keywords: edutainment practices in the Baltics; humanistic psychology; didactic games for IT students; edutainment and stereotypes.*

### 1. Theoretical framework

The concept of edutainment is commonly associated with gamification and a learning through play approach, based on the deliberate deconstruction of the 'traditional' study methods. It is also defined as a synergy of two seemingly contrasting activities, namely, entertainment and education [1]. Etymologically, the word has been classified as the Anglo-Saxon neologism, and like all the neologisms is expected to be a linguistic signifier for a new or recent phenomenon. Although edutainment is perceived as a concept that appeared in the last few decades, its core ideas had been formulated far before the existence of computers and digital media. At the beginning of the 17th century, Czech thinker J. A. Komenský first introduced the notion of 'school as play' based on the postulates of the Enlightenment, thereby the individual approach to a scholar's personality was seen as the main prerequisite for teachers' success [2]. Nowadays, the 'teaching through play' concept is deeply entwined with humanistic psychology that partially echoes the ideas of the Enlightenment. The concept of play has been rooted in the very beginning of pedagogy as a discipline. For this reason, the analysis of edutainment as a notion should not be narrowed to an incomplete yet common definition as *media designed to educate through entertainment*. An abundance of controversial definitions makes it difficult to put a bordering line between edutainment, game-based learning and didactic play; whereas all three aim to reveal scholars' potential by appealing to their emotions and inherent impulses.

The research conducted at Riga Technical University aims to challenge a deeply rooted stereotypical interpretation of edutainment; thereby the latter is seen as something childish and not relevant to the

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system of higher professional education. Instead, the author provides an insight into the deliberate gamification of the study process and presents the fundamentals of this teaching strategy.

## **2. Case Study**

Latvia is one of the first among all European countries to demonstrate the biggest age gap between students and teaching staff in the field of tertiary education of all (5-8) levels. Based on the data retrieved from Eurostat Statistics, the distribution of academic staff among different age groups has shown the leading position of Latvia in the category 60+[3]. Sometimes age difference results in a mental gap caused by conflicting mindsets of different generations. Specifically, the problem might arise when teaching well-versed IT students with partially digitalized cognition and a high level of expectations from the tutor. In this situation, the teacher is expected to meet the demands of the contemporary classroom, thus adjusting their own cognitive competences to the context of modern surroundings. The task is challenging; for this reason, various ice-breaking practices and new teaching methods should be implemented to eliminate the psychological distance. In this context, some methods of edutainment could be integrated and used beneficially in the classroom situation. The reason is that, even apart from the age issues, the appearance of the notion of play or 'joy' in the study environment is a powerful stress reliever itself.

## **3. Methodology**

For the sake of experiment, 40 IT students had been selected for two focus groups to implement the experimental English language course at Riga Technical University. The study module was taught using several edutainment methods. At the beginning of the semester, students were offered a plan that included four didactic games based on principles of competition, as well as four sessions of Socratic circles.

## **4. Results and discussions**

### **4.1 Didactic games**

Didactic games are commonly referred to alternative educating tools that serve some pedagogical purposes [4]. It should be noted that the notion of play rooted in the very idea of this approach brings a high added value to the lesson. The reason for this has been best formulated by Marshall McLuhan, Canadian philosopher, who stated: "Anyone who makes a distinction between games and learning doesn't know the first thing about either". Here we should make a reference to the concept of play as offered by Erving Goffman, a bright Canadian sociologist. He described an adult as a creature that was born naturally inquisitive [5] but due to social restrictions had lost self-motivation for delightful learning. The concepts of joy and play are thereby seen as tools used to deliver the 'inner child' of a scholar, thus enhancing their inherent curiosity.

In the course of experiment, four didactic game sessions had been conducted to accomplish this task. The students were divided in 5 focus groups. At the beginning of the game, each group were given one minute to choose a leader, which was an efficient ice-breaking practice. The same teaching materials (namely texts) were given to the leader of each group. With or without a frontier-based online platform, students were asked to create their own questionnaire or quizzes for the representatives of other groups. As the game session started scholars were getting involved in the competition game scoring one point for each right answer. Remarkably, the points, which equated to marks, were put not by the teacher, but the group of competitors.

Apart from mastering team-building skills, students were given a chance to raise their language proficiency in the informal context of play. Furthermore, this type of edutainment practice had served as a great socio-psychological indicator.

The poll results conducted at the end of the semester, had revealed a correlation between scholars' gender and their attitude to the competition elements in didactic games:



Fig. 1. Evaluation of the competition-based learning practices by female students

### Female respondents

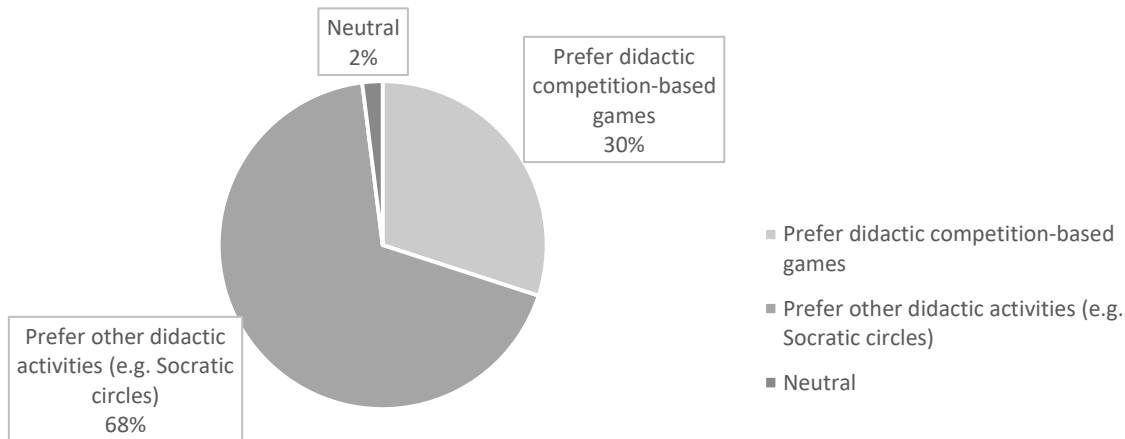
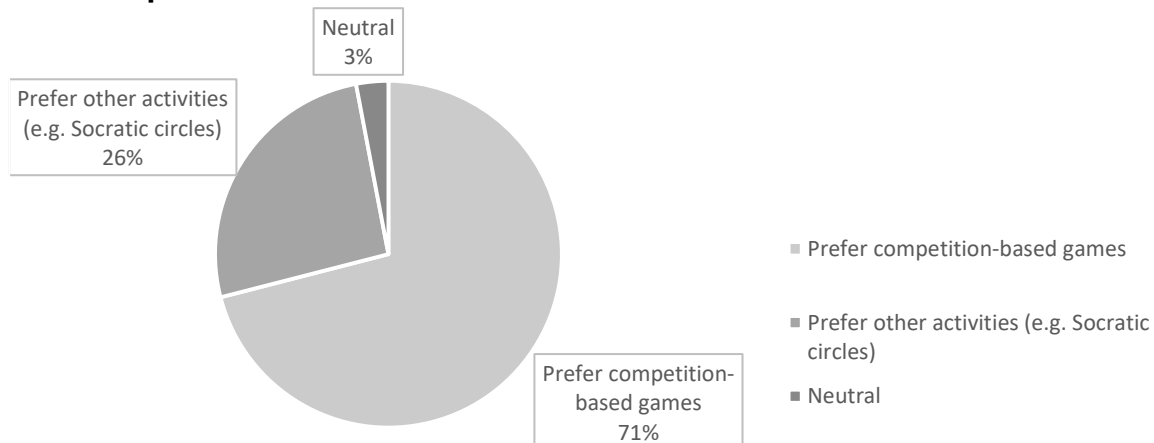


Fig. 2. Evaluation of the competition-based learning practices by male students.

### Male respondents



In contrast to the males, female respondents found competition-based games as ‘empathy lacking’ activities, alien to female nature. The reason for that might be partially explained by some inherent urge for competition that is rather typical for males. Taking into account that the majority of students at the IT faculty were male, didactic competition could still be successfully integrated in the experimental study course.

Regarding the psychological effect of didactic games, 67% of respondents answered that *learning through play* activities had helped them to get rid of shyness when trying to speak a foreign language in groups. The context of play had partially diminished the pressure when overcoming a language barrier.

#### **4.2. Socratic circles and contextual game-based learning**

The practice of Socratic circles dates back to the tradition of Socratic seminars first implemented in the period 399 BC - 470 BC by the famous Greek philosopher, Socrates. The concept of Socratic circles implies a formal discussion with open-ended questions based on a text [6]. By intergrating Socratic methods in study modules a tutor enhances students’ critical thinking and, more importantly, allows them to master the emphatic skills that are essentially lacking in traditional teaching approaches.



At the beginning of each session, the students were offered a role play based on the situational context of the study material. One of the examples best illustrating the idea of the Circles is the discussion related to the problems of gamification and video-game addiction aimed at mastering a foreign language. Having analyzed the study materials, the scholars were expected to express their own ideas and reflections related to video-game addiction (if any) as well as to create an imaginary situation/character that matched the context of discussion. In the course of play, special memory cards were distributed among the students with some key foreign words and phrases that could be used during the seminar.

One of the main achievements of the experimental study module has been best illustrated by one of the students, who defined the Socratic session on video-game addiction “an emotional trigger, which brings the topic out of the classroom context to the realm of their personal experiences and emotions”. The discussion thus becomes more than just scholars’ attempts to get a pass grade; it appeals to their mental efforts since the information has not been perceived solely as *study materials* (no more). Whenever a scholar makes a psychological projection to their own life, the impression they get makes the memory absorb everything related to it.

Matching the context of a scholar’s daily problems, as illustrated above, helps to eliminate possible mental gaps and to facilitate heated discussion in the classroom. In its turn, putting the problem into the context of a role-play allows the tutor to prevent the possible embarrassment and hesitancy a touchy topic may cause.

## 5. Conclusion

Due to the continuous digitalization of the study environment, a new type of cognition arises, and thus there should be a new creative response to the increasing demands of the contemporary study environment. The experimental implementation of this new study concept at Riga Technical University has shown an ability of edutainment to reveal scholars’ hidden potentials and individual inclinations. In the research, students’ ability to overcome possible psychological barriers has been seen as the key prerequisite for successful learning. From this perspective, edutainment has proven to be a highly efficient tool that might be intergrated into the system of higher education throughout the Europe.

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