

The Correlation Between Entertainment and Rigorous Learning Among Iraqi EFL University Students

العلاقة بين التعلم الترفيهي والتعلم الصارم بين طلاب الجامعة المتعلمين اللغة الإنجليزية كلغة أجنبية في العراق

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Abstract

This study aims to investigate correlation between entertainment and rigorous learning among Iraqi EFL university students at the college of education for the woman/university of Baghdad. The field of educational computer game studies has witnessed significant expansion as a result of the notion that games might provide numerous learning advantages, particularly among younger demographics. It is useful to understand how educational games can help strengthen the engagement and learning perceptions of our students towards technology in the light of intensive teaching activities and the actions of teachers to build a respectful, constructive learning atmosphere for the conduct of students towards each other and the rate and level of involvement of students in class discussion. The study employed a questionnaire that ranged from "strongly agree" to "strongly disagree". The study sample included 82 female participants from the English department at the University of Baghdad. This paper explores two components of learning and thorough learning for instructional games. The findings indicated that the majority of students had an increased tendency to engage in programming when utilizing game-based methods as opposed to conventional ways, hence fostering positive attitudes. The results of the study on rigorous learning indicate that students have negative attitudes of several aspects related to teacher-student relationships, lack of effective collaboration, and adherence to classroom conduct norms. Furthermore, the study revealed that there is no correlation coefficient between entertainment and rigorous learning.

Keywords: entertainment, rigorous learning, EFL, gamification

المستخلص

تهدف هذه الدراسة إلى التحقق من العلاقة الارتباطية بين الترفيه والتعلم الصارم لدى طلاب جامعة اللغة الإنجليزية كلغة أجنبية في كلية التربية للبنات / جامعة بغداد. شهد مجال دراسات ألعاب الكمبيوتر التعليمية توسعاً كبيراً نتيجة لفكرة أن الألعاب قد توفر العديد من المزايا التعليمية، خاصة بين المجتمعات الأصغر سناً. من المفيد أن نفهم كيف يمكن للألعاب التعليمية أن تساعد في تعزيز مشاركة طلابنا وتصوراتهم التعليمية تجاه التكنولوجيا في ضوء أنشطة التدريس المكثفة وتصرفات المعلمين لبناء جو تعليمي محترم وبناء لسلوك الطلاب تجاه بعضهم البعض ومعدل ومستوى مشاركة الطلاب في المناقشة الصفية. استخدمت الدراسة استبياناً تراوح من "أوافق بشدة" إلى "لا أوافق بشدة". شملت عينة الدراسة 82 مشاركة من قسم اللغة الانجليزية في جامعة بغداد. تستكشف هذه الدراسة عنصرين من عناصر التعلم، التعلم الترفيهي والتعلم الصارم والتعلم الشامل للألعاب التعليمية. أشارت النتائج إلى أن غالبية الطلاب لديهم ميل متزايد للانخراط في البرمجة عند استخدام الأساليب القائمة على الألعاب بدلاً من الطرق التقليدية، وبالتالي تعزيز المواقف الإيجابية. تشير نتائج الدراسة حول التعلم الصارم إلى أن الطلاب لديهم اتجاهات سلبية في عدة جوانب تتعلق بالعلاقات بين المعلم والطلاب، ونقص التعاون الفعال، والالتزام بمعايير السلوك في الفصل الدراسي. علاوة على ذلك، كشفت الدراسة عن عدم وجود معامل ارتباط بين الترفيه والتعلم الصارم.

الكلمات المفتاحية: الترفيه، التعلم الصارم، اللغة الإنكليزية كاللغة اجنبية، الألعاب التعليمية.

1. Introduction

Researchers have determined that educational games (EG) can offer students numerous benefits for learning due to the highly motivating nature of video games and the characteristics of the present generation of learners (Chang & Chou, 2008:1-14). An experiment conducted by Garzotto (2007:54) demonstrated that multiplayer video games offer benefits in terms of both affective and knowledge-based learning. Throughout the gaming session, kids were observed to be thoroughly engrossed in the games, consistently displaying enthusiasm, inspiration, and excitement. EG offers a diverse range of events that promote engagement in activities related to recreation, leisure, and education across multiple domains. The effectiveness of games in education has also been demonstrated in a range of research. According to their perspective, games promote learning, provide immediate feedback, enhance serviceability, and influence changes in behavior and attitude. The motivation provided by games can thus be seen as a stimulus to further investigate their potential for utilization in education (Sugimoto, 2007:74).

The study aims to explore students' attitudes towards entertainment and rigorous learning, as well as determine the correlation between the two.

2. Literature Review

2.1 Entertainment and Education

It seems to be eminently feasible to make a game useful for study that is both entertaining and interactive, but it has been unusual so far. Exceptions are available. A reasonably realistic urban growth simulation is created by SimCity and is very popular, entertaining, and educational. It is feasible to apply the components of the study mentioned above to a game like this. As a by-product, such a game would also have an educational aspect, as it would allow players to better grasp the tradeoffs intrinsic in strategic decision-making.

For researchers, there is a strong opportunity to use video games as educational instruments for natural ecosystems. A game will foster core principles underlying ecosystem services systems in realistic, hands-on environments by giving players the ability to navigate a landscape. The aim is to include players in the creation of better organizations, better societies and, thus, a better society. Latest research shows that pro-social games can affect pro-social actions positively (Gentile et al. 2009:752).

Edutainment is the fusion of knowledge and enjoyment, resulting in a combined experience. There are multiple fields of research, however they can primarily be categorized into two directions: 1. The utilization of entertaining components in educational applications; and 2. Incorporation of the educational component into television. While examining the complete spectrum of edutainment, it is worth noting that this term is employed by a recent body of literature to describe learning through games. The general purpose of combining two separate ways at first sight is to facilitate the instructional process by adding entertainment components into it. Entertainment-Education-Major educational pedagogy includes:

- Relevance: As individuals can see the utility of the information they are offered, learning is more possible.
- Incremental learning: Where individuals can learn at their own speed, learning is more successful.
- Distributed Learning: Over various times, different persons learn in different ways. In order for people to absorb it, it is necessary to view knowledge differently (Zorica,2014: 4089).

Although edutainment is now being incorporated into formal education, its initial focus was on informal learning and its introduction into the entertainment industry included educational components. However, schooling is a developing option to the traditional education system (Zin & Zain, 2010: 2865). Edutainment is a medium of entertainment aimed at both informing and entertaining. Usually, by incorporating lessons into a familiar medium of entertainment, it aims to teach its audience: TV shows, computer and video games, interactive apps, and so on (Cuccu, 2009: 276).

Zorica, (2014:4091) describes edutainment as instructional and fun video games, TV shows, or other content.

According to Buckingham & Scanlon (2005:41), edutainment is a genre that combines elements of graphics, storytelling, and game-like features. It also adopts a more relaxed and less instructional approach. Gros (2003:6) defines edutainment as the integration of educational content into the entertainment system, highlighting its imposition within the schooling context. Furthermore, he prioritizes game-based learning, asserting that this type of software is specifically produced for parents and teachers, with a primary focus on academic subjects. In contrast, corporate gaming software is only developed for enjoyment purposes, targeting certain audiences.

On the other hand, Okan (2003:255) defines edutainment as a genre of gaming that combines elements of graphics, stories, and game types, while also incorporating a learning objective. The primary objective of edutainment is to promote student learning by utilizing experimentation, interactive content, trial and error, and reinforcement. This approach aims to engage students in such an enjoyable manner that they remain unaware of the simultaneous learning process. The two essential components that are common to both entertainment and education are the format, which serves as the amusement factor, and the message/content, which serves as the educational element. The realm of entertainment is multifaceted and may be experienced through several mediums. It adapts and evolves as the media landscape changes, with the content taking center stage when it needs to be conveyed in new formats. Edutainment comprises several media-based elements, including information and communication technology (ICT), film, new media gaming, and education (Zorica, 2014:4093).

2.2 Edutainment Types

Zorica (2014:4094) observes that from the mid-20th century, the integration of film and television in education has led to the presence of media in the educational environment. The significant transformation in this domain commenced with the advent of the web 2.0 era, characterized by technological advancements and individualized experiences. These highlighted specific aspects of edutainment. The significant improvement was, as can be inferred, in the interactivity section. We also moved to personalizing our viewing spaces and greater interactivity from becoming just viewers of what was provided by TV, film, radio shows. inevitably are now in the early stages of several areas, but potential future trajectories are discernible. When examining different kinds of edutainment, it is important to recognize that edutainment encompasses all hybrid formats that are engaging or involving, but not interactive. Although his first work mostly centered around athletics, it may also be applied in a broader context and extended to encompass the entire field. Furthermore, his classification, which is based on a corporate viewpoint, provides a more thorough categorization of various types of edutainment:

- Location-based experiences can be either immersive and collaborative, where the user actively participates and becomes a member, or non-interactive and observational, where the user can merely sit and explore, such as in movies, science shows, museums, and zoos.
- The purpose and substance of this program involve providing informal education to improve learners' life management abilities, as well as offering skills education through experiences such as simulations.
- Target group: motivation-oriented and age-oriented (learning who have the same attention) (learners who have the same age).
- Media types: television editing, machine edutainment, internet edutainment.

2.2.1 Video

Although the impact of video and multimedia technology on educational performance is still being researched, three fundamental concepts might characterize the pedagogical impact of video:

1. Interactivity with substance (the learner relates to visual content, whether vocally, via note-taking or thinking, or by applying concepts).
2. Engagement (the student actively interacts with the visual content, getting captivated by video, whether it is pre-recorded or live).

3. The learner's ability to transition and retain information may be enhanced compared to other instructional media (ibid).

Video, by incorporating many forms of data such as images, action, sounds, and text, enables a more customized approach to learning that can accommodate the diverse learning styles and individual learning pace of students, surpassing other educational resources. The learner possesses enhanced control over the material acquired through video, enabling a supplementary opportunity for more profound comprehension by virtue of the ability to pause, rewind, fast-forward, and repeat information several times (Zorica, 2014:4095). The ability for students to adjust the learning rate individually allows them to review specific parts of a lesson many times, resulting in a perception of increased learning efficiency. YouTube, often known as Teacher Tube, is the most well recognized platform for utilizing video as an educational and entertaining medium. It was originally developed for instructional purposes. Technical hurdles and copyright issues have severe implications for the long-term use of these videos, highlighting their ephemeral nature. Conversely, videos and platforms for sharing encourage the development of social skills. A beneficial feature of learning, specifically teaching others, arises when students are given the opportunity to produce and share movies with their classmates as a component of their learning setting (ibid:655).

The rapid growth and success of the "Khan Academy" has led to a minor decrease in the utilization of videos in education. Although first presented as the remedy for the educational issue, it actually demonstrated that there was merely a technical alteration in the structure, specifically the format, while the concept itself remained same. However, it emerged as an alternative methodological way to study, known as the flipped classroom, because to advancements in technology. Providing students with the opportunity to watch lectures at their preferred speed, allowing classroom time to be dedicated to discussions, critical thinking, and reviewing. The primary benefit of this service is in the instructor's ability to communicate with both students and track their progress through the teacher's dashboard. The website offers technology in a way that combines education and entertainment, presenting practice problems and rewarding successful outcomes with badges similar to those seen in video games. Khan Academy embodies the long-held aspiration of providing every student with access to an exceptional instructor who can deliver explanations that can be revisited repeatedly at the student's discretion (Multisilta, 2014:656).

2.2.2 Web 2.0

Lasić-Lazić & Banek Zorica (2009:95) observe that web 2.0 developments pertain to a framework that is more participatory and socially oriented. These innovations have the potential to fundamentally change the way content is created, shared, and consumed, as well as how learning environments are constructed. The integration feature of Web 2.0, which allows users to combine and remix current media to create something new, has introduced new challenges in the educational process. This is often done by substituting traditional written lectures with the use of modern multimedia to present ideas and insights. The contemporary context enhances the effectiveness of constructivist theory and social learning. According to the constructivist approach, individuals acquire knowledge by developing their own perspectives on the environment through problem-solving and personal investigation. Vygotsky's work in the realm of social constructivism focuses on the collaboration that occurs in web 2.0 environments, where virtual communities of learners come together to share tools, information, experiences, and responsibilities, thereby engaging in mutual collective learning.

Whitton (2009:18) points out that the constructivist educational environment is a place where "learners can work together and support each other in their guided pursuit of learning goals and problem-solving activities by using a variety of tools and information resources." Examples of the use of the web 2.0 tool are generally targeted at two key streams. One section focuses on communication and creation of knowledge through engagement and exchange of information and the other on visualization approaches or the application of graphic elements as mediators for effective learning. There are various resources that allow each of these learning objectives, such as a "web bookmarking site and an online network" for Pinterest. Matrix,(2014:4) indicates cast to be used in class for the production of postcards that initiate further debate and peer examination.

2.2.3 Video-games (game-based learning or gamification)

Bryce & Rutter (2003:5) argue that it is not uncommon to link the concepts of schooling and learning with clear, enjoyable, and playful experiences. For more than 25 years, digital games have been accessible. As a result, contemporary college students have been immersed in digital gaming since childhood. Games have had a transformative impact on the thinking patterns of present-day pupils, although certain professors exhibit reluctance in adapting their teaching methods or incorporating games into their instructional approach. Students demonstrate a

range of abilities, such as strategic thinking and problem-solving, by engaging in computer gaming. Engaging in games elicits surprise, stimulates learners' curiosity, enhances their creative thinking, and provides enormous enjoyment and a feeling of accomplishment. Engaging in enjoyable activities can enhance the attentiveness and enthusiasm of both adults and children, making them more receptive to learning due to reduced stress levels (Zin & Zain, 2010:2865).

Prensky (2001:243) highlights that play, a voluntary activity, is characterized by its high level of engagement and ability to foster the formation of social groups. Both components can be easily incorporated into the learning environment. Students with tertiary education have a greater level of engagement in sports. Entertainment games are very engaging and motivating, regardless of whether they are played on a computer, game console, mobile screen, or touch screen. Educators have suggested utilizing these game characteristics to facilitate learning. Various gaming genres, including role-playing games, fantasy games, virtual reality games, and first-person shooters, exhibit significant differences in their features compared to this particular game. Computer games can be characterized by their rules, as well as the circumstances of the game and the society around it (Tang, Hanneghan & El Rhalibi, 2009:10).

The technological and inherent picture of any virtual "playground" is determined by the rules and culture that support the play action. The three styles of play (individual, competitive, and collaborative) have an impact on learning, game efficiency, and motivation. Games-based programming can be integrated or introduced into present curriculum to enhance existing learning methods.

Plass, et al (2013:1054) state Some of games-based learning's pedagogical benefits include:

- Fostering a problem-solving mindset in pupils to enhance their learning process
- Immediate recommendations to rectify misunderstandings and foster the generation of ideas, ultimately enhancing learners' understanding of a subject area.
- Enhanced knowledge acquisition through gamified learning.
- Provision of support in the development and enhancement of cognitive abilities that are not typically acquired through formal education.

Acquiring the necessary competencies for Information and Communication Technology (ICT) in the contemporary labor market of the 21st century.

- Promotion of collaborative learning among peers.
- Fostering students' belief and promoting literacy among learners facing challenges such as dyslexia.
- Enhances cognitive learning by stimulating learners' interest in specific subjects.
- Converting recreational play into educational play and incorporating learning into games.

Since learning requires effort, the biggest reason we need to have inspiration is. Learning is also driven by our actual needs in the real world: to live, to earn money, etc. The teacher's conventional role in offering inspiration in the artificial circumstance of training and education was (Wankel & Kingsley, 2009:56).

2.2.3.1 Educational Games Design Characteristics

EG architecture problems arise from various disciplines, including psychology, education, and technology (Grassioulet, 2002:24). Games have both human participants and technological components, necessitating careful consideration of these two elements. Another issue, which has long been a subject of discussion, is schooling. This factor was ignited by the inclusion of the educational component within the games. Due to advancements in both human and technological capabilities, the nature of education has undergone significant transformations and continues to enhance. An educational game is a specialized form of recreation and enjoyment that is designed specifically for the purpose of learning. Another interpretation is that it is described by (Olga, Voroblakov, Kataev & Tarasenko, 2008:62) as a learning mechanism that implements one or more aspects of the learning process (such as learning theory, skill development, and assessment of information level) within a gaming framework.

The learning results will be based on the taxonomy of Bloom's first three levels: awareness, interpretation and use. Scaffolding, a term used to provide input in the form of learning content to strengthen the learning experience of students, is another concept (Graci, 1992:247).

2.3 Defining and Recognizing Rigorous Learning

In the classroom, educators fail to define just what rigorous instruction is and what it feels like. Without a popular concept of intensive learning, it is difficult to assess the effectiveness of teaching and the success of learners. Schools can tread water, at best, without regularly supplying teachers and leaders with professional

development around rigor and significance. We created the Integrated Instructional Review Framework in an attempt to help educators define standards of comprehensive learning so that they can consistently incorporate them into teaching (CIR). CIR is a four-step coaching process that focuses on open, truthful and continuous dialogue with leaders and students, structured as an action plan for rigorous learning. The goal is to substitute a constructive coaching model for divisive, often ineffective tests where teachers feel encouraged in their search to deliver rigorous learning to their classrooms, rather than disciplined for errors or deficiencies (Daggett & Gendron, 2015).

INDICATOR DESCRIPTIONS			RUBRIC CATEGORIES
<p>Academic Discussion: The lesson provides students with chances to participate in intellectually stimulating discussions with both adults and peers, using a wide range of language.</p> <p>Learning Connections: The lesson incorporates diverse possibilities for students to establish connections between their</p>	<p>High-Level Questioning: The lesson provides students with the opportunity to respond to and present a range of increasingly difficult inquiries that demand more advanced levels of critical thinking.</p> <p>Authentic Resources: Students must use several knowledge sources to solve real-world tasks throughout the class.</p>	<p>Thoughtful Work: The class intentionally prepares students to achieve a number of high-quality learning objectives.</p> <p>Meaningful Work: Students must complete relevant, practical assignments that relate to related vocations.</p>	<p>Rigor</p> <p>Relevance</p>

learning and practical applications in the real world.			
Formative Processes and Tools: Formative tool and process outcomes are used to plan differentiated education for all students.	Learning Environment: The classroom environment is focused on fostering a culture of reverence and dedication to acquiring knowledge.	Active Participation: The class is specifically intended to optimize the involvement of every student during its entirety.	Engagement

Description of Rigorous learning. Adopted from (Daggett & Gendron, 2015:3)

2.5 Delivering Rigorous Learning for All Students

Twenty-five years ago, as a guide to help schools educate ALL students in a manner that qualified them for college and jobs, we created the Rigor/Relevance System. The Paradigm was born from the discovery that technology was pushing progress at a faster and faster pace, and that what students needed to know would change along with it for good lives in an increasingly technology-based environment. This assertion was then valid, and today it remains true. As a guide for educators to devise lesson programs that achieve clear Quadrant D learning, the Rigor/Relevance Paradigm. True rigor and relevance take place in Quadrant D. When learners in Quadrant D are practicing, they are learning to think analytically and creatively. Their reasoning is complicated and they learn the skills to adapt knowledge flexibly to a multitude of real-world scenarios, including unexpected ones. In other words, in dynamic professions, they are beginning to think in the manner they would need to (Daggett & Gendron, 2015:5).

3. Methodology

3.1 Participants

The research was performed at the college of education for Women/ University of Baghdad with (82 female) English department students, in the 4th stage. During the academic year, samples are chosen randomly (2020-2021).

3.2. Instrument

The instrument for data collection (questionnaire) consists of two sections. The first part is the perception of students towards entertainment learning; the second part is the perception of students towards rigorous learning. The checklist of the questionnaire was adopted by Ibrahim, & Jaafar, (2011) and Matsumura & Crosson (2008). The Likert-scale is used as part of the questionnaire; the first part consists of 14 items, and the second part consists of 15 items. The responses to the scale varied from "Strongly Agree (5)" to "Agree (4)" to "Neutral (3)" to "Disagree (2)" to "strongly Disagree (1)".

3.3. Validity

The instrument is correct if it correctly measures what it is meant to calculate (Ebel, 1972: 555). To guarantee the face validity of the questionnaire, members of the teaching team of the jury university who ensured the face validity of the assessments were subjected to it. Each juror is asked to state comments and recommendations on the suitability of the specifics of the questionnaire, see the table (1)

Table 1 Names of Jury Members

Position	Specialty	Name	No.
Tikrit university / collage of Arts	ELT	Prof. Dr. Nahida T. Majeed	
Tikrit university / collage of education for woman	Linguistic	Prof. Dr. Isra'a B. Abdurrahman	
Anbar university / collage of Arts	ELT	Asst. Prof. Ali S. Jameel	
Tikrit university / collage of education for humanities	ELT	Asst. Prof. Najwa Y. Ismeal	

3.4 Reliability

According to Brown (2003: 98), reliability refers to the extent to which the results can be regarded as consistent or precise. To ascertain the dependability of the questionnaire. The Cronbach Alpha Coefficients were determined in order to

assess the efficacy of "student perceptions of entertainment learning and student perceptions of rigorous learning." Reliability values ranging from 0.78 to 0.77 are considered acceptable in group comparisons, as seen in table 2.

Table 2 Reliability of Questionnaire

Alpha Cronbach	
0.78	1-students perceptions towards entertainment learning
0.77	2- students perceptions towards rigorous learning
0.82	Total

4- Data Collection

4.1 Data Analysis Related to the Questionnaire

4.1.1 Student's Attitudes Towards Entertainment Learning

To determine the difference between the theoretical mean and entertainment learning, all mean scores are obtained and compared. Statistics show that the mean scores of the theoretical mean is 42 and that of the entertainment learning is 64.378, a one-sample independent t-test is employed. The computed t-value of 77.395 exceeds the tabular value of 1.990 at a significance level of 0.05 and with 81 degrees of freedom. Therefore, the statistical analysis shows that entertainment learning is significantly favoured, and the sample demonstrates a good degree of engagement in entertainment learning. Observe the following table:

Table (3) The Mean Score, Standard Deviation and t-Value of the Entertainment learning

Sig.	DF	T- Value		Theoreti	S.D	Mean	Samp	Scale
0.05	81	Tabulate	Comput	cal Mean			le	
Significa		d	ed				Size	
nt		1.990	77.395	42	2.61	64.37	82	Entertainm
					8	8		ent
								learning

4.1.2 Student's Attitudes Towards Rigorous Learning

To determine the difference between the theoretical mean and entertainment learning, all mean scores are obtained and compared. Statistics show that the mean scores of the theoretical mean is 45 and that of the rigorous learning is 45.1951, a one-sample independent t-test is employed. The computed t-value of 0.206 is lower than the tabular value of 1.990 at a significance level of 0.05 and with 81 degrees of freedom. This suggests that students' views do not endorse the efficacy of rigorous learning, as shown in the Table (4).

Table (4) The Mean Score, Standard Deviation and t-Value of the Rigorous learning

Sig. 0.05 Not significa nt	DF 81	T- Value Tabulat ed	Comput ed	Theoretic al Mean	S.D	Mean	Sampl e Size	Scale
		1.990	0.206	45	8.59 5	45.19 5	82	Rigorou s learnin g

4.3 The Correlation between EFL Students' Entertainment and Rigorous learning

In order to find out the correlation between "Entertainment and Schema Rigorous learning". To verify this aim, Pearson correlation coefficient is used to investigate the correlation between the two variables. all mean scores are obtained and compared. Statistics show that the mean scores of the entertainment learning is 64.378 and that of the rigorous learning is 45.195, with standard deviations of 2.618 and 8.595, respectively. The results calculated reveal that the r- value is 0.061 is lower than the critical one 0.324 at a level of significance 0.05. This indicates that there is a negative significance correlation between EFL students' students' entertainment and rigorous learning, as illustrated in the table 5.

Table (5) The Correlation between EFL students' Entertainment and Rigorous learning

Sig. 0.05 Not Significant	Critical Value	r- Value	Sample Size
	0.217	0.061	82

4.2 Discussion of the Results

According to this study, students were enthusiastic about using games to learn. Indeed, students love using educational games to finish their exercises, and games somehow emphasize the subject matter. Games can be effective for less motivated kids. Games can boost pupils' learning motivation. Games strengthen students' cognitive abilities, such as logical reasoning and critical thinking, and boost their optimism. The gaming UI must be user-friendly for smooth gameplay. Otherwise, pupils may struggle, becoming frustrated and abandoning the activities.

The students were enthusiastic about using games in learning. However, educational games are very young, therefore game genre, design for multiple learning outcomes, learning styles, and student demands must be carefully considered. Educational game creation is complicated by the various needs of software developers, content specialists, and instructional designers, as well as customer expectations. Our future work will improve the game's architecture by improving settings, navigation, and experiences and adding programming material. After using the games, we can test pupils' programming skills.

The findings from rigorous learning complement research indicating a link between the constancy of the classroom setting, hard teaching, and students' experiences. The majority of young learners exhibit unfavorable dispositions towards demanding academic pursuits. Research findings indicate that the level of admiration demonstrated by teachers towards students is not directly linked to the level of respect exhibited among students, nor to the extent to which students value their own contributions during classroom discussions. The correlation between students' engagement in class discussions and their capacity to participate in collaborative work in classrooms was not established. Displaying standards for respectful and cooperative student behavior in classrooms during class arguments can negatively impact student participation. The figure 1 below illustrates the average theoretical and student attitudes towards entertaining and rigorous learning.

Figure 1. Comparison of Means between entertainment and rigorous learning

According to the results, there is no correlation coefficient between entertainment and rigorous learning. This is due to students' negative attitudes towards rigorous learning, which is undesirable in the educational process and leads to problems and a gap between the teacher and the student. The correlation between the teachers' adherence to educational standards and the level and quality of student engagement in class discussions or interactions with their peers was examined. The specific objective of these studies was to analyze the proportional impact of the classroom environment and the quality of instruction on actual student experiences.

5. Conclusions

A combination of two streams is presented by Edutainment: education and entertainment combine into one. It seems to be eminently feasible to make a game useful for study that is both entertaining and instructional, but it has been unusual so far. A reasonably realistic urban growth simulation is created by SimCity and is very popular, entertaining, and educational. For biologists, there is a strong opportunity to use video games as educational instruments for ecosystem services. The aim is to include players in the creation of better organizations, better societies and, thus, a better society. Latest evidence indicates that pro-social games can have a positive impact on pro-social behavior, and this can have a proportional impact on environmental behavior. As previously reported, the big change in this area began with the creation of the web 2.0 climate, technical innovation, and personalization. This took numerous facets of edutainment to the surface, and in the interactivity section, the big shift was.

For all students to achieve thorough learning, it is important to teach each student in a way that is appropriate to him or her. In the classroom, educators fail to define just what intensive instruction is and what it feels like. Schools can tread water, at best, without regularly supplying teachers and leaders with professional development around rigor and significance. A four-step coaching process that focuses on an open, truthful and continuing dialogue between leaders and teachers is the Integrated Instructional Review Process.

References

- Brown, N. A. (2003). *Language and identity in Belarus*. *Language Policy* 4. 311-332.
- Bryce, J. O., & Rutter, J. (2003). Gender dynamics and the social and spatial organization of computer gaming. *Leisure studies*, 22(1), 1-15.
- Buckingham, D., & Scanlon, M. (2005). Selling learning: towards a political economy of edutainment media. *Media, Culture & Society*, 27(1), 41-58.
- Chang, W.-C., & Chou, Y.-M. (2008). *Introductory C Programming Language Learning with Game-Based Digital Learning*. Paper presented at the Proceedings ICWL 2008.
- Cuccu, R. (2009). From E-Learning to T-Learning. In *Encyclopedia of Information Communication Technology* (pp. 276-283). IGI Global.
- Daggett, W. R., & Gendron, S. A. (2015). Rigorous learning: Bridging students from our classrooms to successful lives. In *23rd Annual Model Schools Conference* (pp. 1-7).
- Ebel, R. L. (1972). *Essentials of Educational Measurement*. New Jersey
- Garzotto, F. (2007). *Investigating the Educational Effectiveness of Multiplayer Online Games for Children*. Paper presented at the Interaction Design and Children (IDC 2007), Aalborg, Denmark.
- Gentile, D.A., Anderson, C.A., Yukawa, S., Ihori, N., Saleem, M., Ming, L.K., Sakamoto, A., (2009). The effects of prosocial video games on prosocial behaviors: international evidence from correlational, longitudinal, and experimental studies. *Personal. Soc. Psychol. Bull.* 35(6), 752-763.
- Graci, C., Odendahl, R., & Narayan, J. (1992). Children, chunking, and computing. *Journal of Computing in Childhood Education* 3(3/4), 247-258.
- Grassioulet, Y. (2002). *A Cognitive Ergonomics Approach to the Process of Game Design and Development*. Unpublished Masters Thesis, University of Geneva.

- Gros, B. (2003). The impact of digital games in education. *First Monday*, 8(7), 6-26.
- Lasić-Lazić, J., Špiranec, S., & Banek Zorica, M. (2009). New information literacy for new learning environments: the impact of the web 2.0. *Proceedings of e-learning 2009*, 95.
- Matrix, S. (2014). Inspired by Pinterest: Teaching Visual Digital Literacy with a Creative Postcard Assignment. *eLearning Papers*, (38), 4.
- Multisilta, J. (2014). Mobile panoramic video applications for learning. *Education and Information Technologies*, 19(3), 655-666.
- Ogrizek Biškupić, I. Banek Zorica, M. (2012) E- Learning Curriculum Development // *Mccsis Iadis Multi Conference on Computer Science and Information Systems 2012 - e-LEARNING 2012 / Baptista Nunes, Miguel; McPherson, Maggie (ur.)*. Lisabon, Portugal : IADIS Press. 349-35.
- Okan, Z. (2003). Edutainment: Is learning at risk?. *British Journal of Educational Technology*, 34(3), 255-264.
- Olga, S., Voroblakov, P., Kataev , A., & Tarasenko, A. (2008, June-July 2008). *Educational Games for Learning Programming*. Paper presented at the Third International Conference "Modern (E-) Learning" Mel 2008 Varna, Bulgaria.
- Plass, J. L., O'Keefe, P. A., Homer, B. D., Case, J., Hayward, E. O., Stein, M., & Perlin, K. (2013). The impact of individual, competitive, and collaborative mathematics game play on learning, performance, and motivation. *Journal of educational psychology*, 105(4), 1050.
- Prensky, M. (2001). *Digital Game-Based Learning*. New York: McGraw-Hilly.
- Roslina, I., Rasimah, C. M. Y., & Azizah, J. (2008). *Computer Games Playing Activities: Habits of Universiti Teknologi Malaysia Student*. Paper presented at the International Conference on IT and Multimedia (ICIMU), Bangi, Selangor.

- Rubijesmin, A. L. (2007). *Understanding Malaysian students as gamers: Experience*. Paper presented at the Proceedings of the 2nd International Conference on Digital Interactive Media in Entertainment and Arts Perth, Australia.
- Shamini Gunasekaran, Siva Kumar Dorairaj. (2008). *Designing Computer Games to Introduce Programming to Children*. Paper presented at the Information Technology and Multimedia at UNITEN (ICIMU' 2008).
- Sugimoto, M. (2007). *What can children learn through game-based learning systems*. Paper presented at the 1st IEEE International Workshop on Digital Game and Intelligent Toy Enhanced Learning (DIGITEL '07).
- Tang, S., Hanneghan, M., & El Rhalibi, A. (2009). Introduction to games-based learning. In *Games-based learning advancements for multi-sensory human computer interfaces: Techniques and effective practices* (pp. 1-17), IGI Global.
- Wankel, C., & Kingsley, J. (2009). *Higher education in virtual worlds: Teaching and learning in Second Life*. Emerald Group Publishing.
- Whitton, N. (2009). Learning and teaching with computer games in higher education. In *Games-Based learning advancements for multi-sensory human computer interfaces: Techniques and effective practices* (pp. 18-33). IGI Global.
- Wilson, B. G. (1996). *Constructivist learning environments: Case studies in instructional design*. Educational Technology.
- Zin, H. M., & Zain, N. Z. M. (2010). The effects of edutainment towards students' achievements. In *Regional Conference on Knowledge Integration in ICT* (Vol. 129, p. 2865).
- Zorica, M. B. (2014). Edutainment at the higher education as an element for the learning success. In *Proceedings of EDULEARN14 Conference* (pp. 4089-4097).

Appendix (A)

Students' perception toward entertainment learning

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	item	No.
					I think educational games activity gives me lots of benefits	1.
					I prefer to answer questions with educational games more using books or paper	2.
					I am very interested in using educational games for learning in the future	3.
					I prefer to do exercises in educational games rather than quizzes during class	4.
					The usage of computer games makes this subject more interesting	5.
					I can learn better by educational games	6.
					Games can learn according to my own pace and sequence.	7.
					games more flexible for me to determine my learning time	8.

					games more flexible for me to choose my learning place	9.
					The content of the games match my subject syllabus	10.
					I wish I have more opportunities to learn using this game approach	11.
					I prefer using games to learn compared to traditional methods in a class	12.
					I would like to learn all computer subjects using educational games	13.
					I wish these games will be available online for easy access	14.

Students' perception toward rigorous learning

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	item	No.
					Teacher respect for students	1.
					Opportunity for cooperative work	2.
					Rules for respect/class behavior	3.
					Teacher presses for evidence	4.

					Teacher links student contributions to each other	5.
					Rigor of discussion	6.
					Rigor of materials	7.
					The rigor of lesson activity	8.
					Rigor of expectations	9.
					Clarity of expectations	10.
					Access to expectations	11.
					Students respect one another	12.
					Student participation in class discussions	13.
					Students link contributions to others'	14.
					Students provide evidence of opinions	15.