Exploring Game-Based Learning (GBL) through Learning Management Systems in Teaching Batas Militar (Martial Law) to Elementary Students' Achievement

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ABSTRACT

Identifying pedagogies in teaching Batas Militar (Martial Law) in the Philippines to elementary students has been proven to be a daunting task in the 21st century learning. This experimental study investigates the use of Game-Based Learning (GBL) in teaching Batas Militar to select thirty (30) grade 6 students of a laboratory school. By using a true-experimental research design, the participants underwent two different instructional modalities: traditional instruction and GBL. Employing Paired t-Test and percentage frequency distribution, this study compared the pre-test and post-test scores of learners in traditional instruction and game-based instruction. The findings revealed no significant statistical difference between traditional teaching and GBL in terms of overall knowledge gain. However, further examination of the data indicated that GBL contributed significantly to student achievement, specifically when considering various factors, such as

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motivation, content mastery, and higher-order thinking skills. The incorporation of game elements reportedly provided a more engaging, entertaining, and informative learning environment, promoting active participation and enhancing student achievement.

Keywords: *batas militar, game-based learning (GBL), history teaching, student achievement*

Introduction

The rise of digital technologies at the advent of the 21st century resulted in a series of advancements in the educational landscape in order to thrive with the ever-changing demands of learners in the modern classroom. This dependence led to the massive integration of information and communication technologies (ICTs) in the field of education.[1] This phenomenon has transformed the educational landscape from Education 3.0 to 4.0, leading to the emergence of cybergogy—a student-centered teaching-learning mechanism, which addresses 21st-century demands by integrating ICTs to support learners navigate both familiar and unfamiliar contexts.[2] As a design, it is a model meant as a structure for online learning that addresses the students' cognitive, emotive, and social domains.[3] Additionally, cybergogy concentrates on enabling grown-ups and youth to study by encouraging and technologically empowering student-focused self-governing and community-oriented learning in a virtual domain.[4]

Cybergogy, in this sense, allows humans co-partnered with ICTs to delve into complexities, discover new possibilities, and spearhead innovations that enable them to function in both familiar and unfamiliar contexts.[5] Hence, this revolutionized learning opportunities and teaching methodologies whereas educational actors can engage and immerse within virtual environments, communicate with diverse learning communities, and experience innovative

[1] Rusmini Ku Ahmad, "Integrating Technology into Teaching and Learning.," in *SEAMEO-UNESCO Education Congress & Expo*, 2004, https://www.academia.edu/528134/Integrating_Technology_into_Teaching_and_Learning.
[2] J. Rawoofu Nisha, "Evolution of Education: Towards Sensory Emotive Web," *International Journal of Science, Engineering and Management (IJSEM)* 3, no. 4 (April 2018): 655–58.
[3] Minjuan Wang and Myunghee Kang, "Cybergogy for Engaged Learning: A Framework for Creating Learner Engagement through Information and Communication Technology," in *Engaged Learning with Emerging Technologies*, ed. David Hung and Myint Swe Khine (Dordrecht: Springer Netherlands, 2006), 225–53, https://doi.org/10.1007/1-4020-3669-8_11.
[4] S.I. Carrier and L.D. Moulds, "Pedagogy, Andragogy, and Cybergogy: Exploring Best-Practice Paradigm for Online Teaching and Learning," *Sloan-C 9th International Conference on Asynchronous Learning Networks (ALN)*, November 2003.
[5] Nisha, "Evolution of Education: Towards Sensory Emotive Web."

teaching-learning processes, regardless of their spatial and temporal contexts. In relation to this, the COVID-19 pandemic compelled educational institutions worldwide to adopt remote learning, optimizing its benefits to overcome challenges. This shift necessitated the use of ICT in instruction to enhance students' learning experiences, ensuring non-disruptive, lifelong, and quality education during the health crisis.[6]

With this, one of the design elements of cybergogy features the utilization of situating tools which are applications and software that immerse learners in a learning environment where they experience real-life and life-like situations to learn the content and assessment process[7]. In this case, game-based learning is one of the techniques being optimized to propel students to imagine, elaborate, solve problems, and synthesize ideas generated through game dynamics, game mechanics, and game thinking.

Game-Based Learning

Game-Based Learning (GBL) is not a new concept, as a teaching strategy that emerged in the early 1980s and has been widely recognized for over four decades. However, there is a significant rise in its demand in recent years, as a growing trend in 21st-century classrooms. GBL is not merely creating games for learners to play, but taking conscious efforts to design learning activities that gradually familiarize them with educational concepts and pave the way for the achievement of learning outcomes. This is perceived by educators as an opportunity to create interactive and engaging learning environments, brought by the advent of technology and the widespread availability of the internet.[8]

There has been a great deal of confusion regarding the difference between Gamification and GBL. Gamification is more anchored on entertainment and engagement. It is the utilization of gameplay elements in non-game contexts, such as mimicking the merits of rewards in the classroom the same way with

[6] Erwin Rotas and Michael Cahapay, "Difficulties in Remote Learning: Voices of Philippine University Students in the Wake of COVID-19 Crisis," *Asian Journal of Distance Education* 15, no. 2 (December 1, 2020): 147–58; Zuheir N. Khlaif, Soheil Salha, and Bochra Kouraichi, "Emergency Remote Learning during COVID-19 Crisis: Students' Engagement," *Education and Information Technologies* 26, no. 6 (November 2021): 7033–55, https://doi.org/10.1007/s10639-021-10566-4.

[7] Cher Ping Lim and Grace Oakley, "Information and Communication Technologies (ICT) in Primary Education," in *Creating Holistic Technology-Enhanced Learning Experiences: Tales from a Future School in Singapore*, ed. Lee Yong TAY and Cher Ping LIM (Rotterdam: SensePublishers, 2013), 1–18, https://doi.org/10.1007/978-94-6209-086-6_1.

[8] Katrina Serrano, "The Effect of Digital Game-Based Learning on Student Learning: A Literature Review," *Graduate Research Papers*, January 1, 2019, https://scholarworks.uni.edu/grp/943.

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game technologies in order to stir up students' interest; while GBL puts an emphasis on the application of games in directing the learners towards the learning goals[9]. The former incorporates game-like aspects in order to fit the lesson content, while the latter adjusts the lesson content to fit the game. To put it simply, gamification only supports students' learning, while GBL directs it.

GBL in education contends that games drive learning for three major reasons: (1) *motivation*, by integrating elements of fun in order to capture the interest of the learners; (2) *content mastery*, by offering opportunities for drill and practice, and (3) *higher order thinking and social skills*, by employing problem-solving approach and practical application to cultivate critical thinking and collaboration. However, only a few educational institutions put all of these three into practice and most of them fall short of the third.[10] Additionally, Jan and Gaydos[11] provided other perspectives in viewing GBL. Firstly, they argue that it is a "*learning approach driven by game technologies.*"[12] From this perspective, the learning transpires during the gameplay, which implies making the most out of digital and non-digital games to aid student development. This is best achieved when players can progress through the game at their own pace, which is not ideal for the school setting; second, GBL is a "learning approach driven by both game technologies and corresponding pedagogies."[13] In this view, learning does not merely occur within the gameplay itself, but also through teacher instruction, peer collaboration, and other pedagogical means. Having said this, technological and pedagogical innovation cannot be separated from each other. Therefore, this is an ideal model for schools to implement; and third, GBL is a "*pedagogical approach informed by game design concepts.*"[14] In comparison to the first two, this gives more regard to the pedagogical approach, which demands advancing the teachers' expertise in order for them to design effective gamified learning activities such as the integration of roleplaying, problem-solving challenges, healthy competition, and reward systems as strategies to incorporate elements of gameplay into educational contexts (e.g. face to face classes, online learning communities).

[9] Alena Letina, "GAME-BASED LEARNING IN PRIMARY SCIENCE AND SOCIAL STUDIES" (14th annual International Conference of Education, Research and Innovation, Online Conference, 2021), 9239–47, https://doi.org/10.21125/iceri.2021.2129.
[10] Mingfong Jan, "A Literature Review of Game-Based Learning," Research in Action, accessed October 15, 2024, https://singteach.nie.edu.sg/2013/10/30/issue45-research02/.
[11] Mingfong Jan and Matthew Gaydos, "What Is Game-Based Learning? Past, Present, and Future," *Educational Technology* 56, no. 3 (2016): 6–11.
[12] Jan and Gaydos, 8.
[13] Jan and Gaydos, see note 9 above.
[14] Jan and Gaydos, see note 9 above.

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Given all these points, it is crucial to address the role of teachers in GBL. From typically being the content master, who delivers the knowledge to the learners, they are more like game designers in this context, who ensure the development of their higher-order thinking skills by means of creating holistic game mechanics. The tough challenge in this research domain is to measure what it takes for teachers to become effective classroom game designers and how educational institutions can help them attain such expertise.

GBL in Teaching Social Studies

GBL is an effective instructional method that enhances student engagement and promotes active learning. Educators can implement GBL by selecting educational games or designing game-like activities that align with the learning objectives of the social studies curriculum. According to Gee,[15] these games should offer worthwhile chances for students to investigate historical events, examine cultural phenomena, and interact with challenging social concerns. Additionally, by including game components like quests, challenges, and simulations, educators can incorporate GBL into the classroom.

Moreover, Klofer et al.,[16] contend that these components produce immersive and interactive experiences that encourage the development of critical thinking, problem-solving, and collaborative abilities. Teachers can create a dynamic and engaging learning environment in the classroom that promotes greater comprehension and retention of social studies materials by utilizing GBL.

To effectively utilize GBL in the classroom, educators can adopt a learner-centered approach and provide opportunities for students to explore and discuss their experiences within the game.[17] Teachers can help students share their ideas, employ various strategies, and assess the historical accuracy or cultural appreciation depicted in the games during class discussions and reflection sessions. Additionally, by including GBL alongside other teaching

[15] James Paul Gee, "What Video Games Have to Teach Us about Learning and Literacy," *Comput. Entertain.* 1, no. 1 (October 1, 2003): 20, https://doi.org/10.1145/950566.950595.
[16] Eric Klofer, Scot Osterweil, and Katie Salen, "Moving Learning Games Forward: Obstacles, Opportunities, and Openness" (The Education Arcade: Massachusetts Institute of Technology, 2009), https://education.mit.edu/wp-content/uploads/2018/10/MovingLearningGamesForward_EdArcade.pdf.
[17] Thomas Hainey et al., "A Systematic Literature Review of Games-Based Learning Empirical Evidence in Primary Education," *Computers & Education* 102 (November 1, 2016): 202–23, https://doi.org/10.1016/j.compedu.2016.09.001.

techniques like lectures, readings, video watching, and group projects, educators can make it a part of a bigger educational plan. With the help of this integrated method, students can relate their gaming experiences to more general social studies ideas and practical applications.[18] Education professionals may develop a thorough and interesting learning environment that accommodates various student needs and learning preferences by offering a well-balanced mixture of game-based activities.

Another study examined the impact of computer-based game-based learning (GBL) in a social studies classroom through a quasi-experimental design comparing a control group that used traditional teaching methods with an experimental group utilizing GBL. The findings confirmed the hypothesis on student achievement, revealing that the experimental group showed greater improvement in post-test scores compared with the control group; however, there was no significant difference in motivation levels between the two groups. Consequently, it is recommended that teachers balance technology with traditional teaching methods and prioritize immediate feedback in GBL implementation. Educational institutions should also invest in game technologies to enhance the accessibility of GBL for learners.[19]. From both the learners' and teachers' viewpoints, Jančič & Hus take the perspectives of 290 fourth and fifth-grade students and 177 teachers into account through 56 social studies class observations. The results show that teachers rarely use didactic games in social studies, with role-playing being the most common. Learners generally have a positive attitude towards game-based learning (GBL) in the subject, despite its infrequent use. While 79% of teachers are interested in incorporating GBL more often, they face constraints such as limited time, large class sizes, and a lack of ready-to-use materials. Additionally, there is a noted demand for teacher training to address the availability and affordability of instructional games.[20]

In the Philippines, the Department of Education (DepED) has collaborated with Microsoft Philippines to create a gamified mobile application through Minecraft: Education Edition (M:EE) which served as a prime instructional material for facilitating GBL for enhanced, entertaining, and more

[18] Mansureh Kebritchi, Atsusi Hirumi, and Haiyan Bai, "The Effects of Modern Mathematics Computer Games on Mathematics Achievement and Class Motivation," *Computers & Education* 55, no. 2 (September 1, 2010): 427–43, https://doi.org/10.1016/j.compedu.2010.02.007.
[19] Shannon Magnacca, "Game-Based Learning in the Social Studies Classroom," *Instructional Technology Education Specialist Research Papers Georgia Southern University* 7 (January 1, 2013), https://digitalcommons.georgiasouthern.edu/edu-papers/7.
[20] Polona Jančič and Vlasta Hus, "Teaching Social Studies With Games:," *International Journal of Game-Based Learning* 8, no. 2 (April 2018): 68–79, https://doi.org/10.4018/IJGBL.2018040106.

meaningful learning experiences amidst the pandemic.[21] This gamified instruction addresses social studies competencies, particularly active citizenship. DepEd emphasized that such tools enhance engagement and motivation in young learners through immersive experiences. Moreover, the app transcends mere play and learning, providing a foundation for values formation essential for cultivating virtues like nationalism, patriotism, and global citizenship.[22]

Although there are numerous studies on the application of GBL in the teaching of Social Studies, this topic is still insufficiently explored in the Philippine context. This emphasizes the importance of conducting further research regarding GBL from the local perspective.

The Teaching of *Batas Militar* in the Philippines

History, as one of the course contents in the *Araling Panlipunan* (social studies) of the Philippine basic education curriculum, is deemed important in identity-making and responsible citizenship.[23] However, history teaching has been jeopardized by teaching strategies making the learning process merely focused on rote memorization of people and dates and eventually resulting in the malnutrition of historical knowledge and critical thinking skills. These deficiencies have been manifested in a series of moral panics regarding the mundane learning of history since the post-EDSA era. Hence, this made Filipinos, not only students but also adults, vulnerable to networked disinformation and propaganda within their societal landscapes.

Along with this, historical distortion has been widely utilized in political schemes to manipulate constituents, ideologies, and public opinion which greatly polarized society in the long run. Studies have emphasized that the maverick presidency of Duterte, driven by his populist narratives and fascist tendencies, facilitated the notorious epoch of disinformation due to his rampant attacks against journalists, media companies, and the academe. In this sense, social media platforms such as Facebook, Twitter, and Youtube served as avenues for trolls, fake news peddlers, and networked propaganda

[21] Merlinda Hernando-Malipot, "DepEd Embraces Game-Based Teaching, Learning through Minecraft: Education Edition," *Manila Bulletin*, March 20, 2022, https://mb.com.ph/2022/3/20/deped-embraces-game-based-teaching-learning-through-minecraft-education-edition.
[22] Republic of the Philippines Department of Education, "DepEd, Microsoft Philippines Engages Students, Teachers through Game-Based Learning | Department of Education," accessed October 15, 2024, https://www.deped.gov.ph/2022/04/28/deped-microsoft-philippines-engages-students-teachers-through-game-based-learning/.
[23] Wensley M. Reyes, "History Teaching, Thinking Development, and Transforming Society," *SUSURGALUR* 2, no. 2 (2014), https://doi.org/10.2121/susurgalur.v2i2.83.

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movements exploiting the benefits of free speech and the keen digital ecosystem—paving the way for historical negationism.[24] Pomerentsev, in his study, asserted that historical distortion and *negationism* eventually benefited the infamous late dictator, Ferdinand Marcos Sr. as this era paved the way for the rehabilitation of his reputation from the atrociousness and controversies relating to this presidency in particular the declaration of Martial Law during his dictatorship which shed light on the extreme corruption, crony system, and government propaganda.[25] In this regard, a Rappler news article supported this claim as it also favored his son, Marcos Jr., as he championed the presidential election last year driven by the 3Ns such as (1) *new media* (proliferation of networked trolls utilizing the power of algorithms within social media ecosystems); (2) *nostalgia* (continuous romanticizing the so-called achievements and projects during his father's presidency); and (3) *negationism* (the narrative of denial which triggered to manipulate the minds of the Filipinos who have deficiencies in historical knowledge to support their lies and disinformation schemes).[26] Hence, the return of the Marcoses to the executive poses a great disparagement in historical thinking, teaching, and knowledge among Filipinos.

Given these facts, it is indeed necessary for educational institutions to be firm in this time of digital disinformation wherein lies are spreading much faster than facts. However, it requires a collective effort to change the system from within in order to generate opportunities to mitigate the prevalence of misinformation, propaganda, lies, and polarization in digital ecosystems. In this sense, Reyes, in his study, stressed the desire of changing society starts with changing from within—from ways of teaching and learning history and modifications of educational strategies and frameworks relating to history teaching.[27]

Student Achievement

Student Achievement is commonly defined as the performance or outcomes in education. Suvarna & Bhata argues that academic achievement comprises

[24] Luis Zuriel P Domingo, "Removing Philippine History in the 'Age of Disinformation':," 2021, https://www.academia.edu/48855682/Removing_Philippine_History_in_the_Age_of_Disinformation_politics_implications_and_efforts.
[25] Peter Pomerantsev, "The Disinformation Age: A Revolution in Propaganda," *The Guardian*, July 27, 2019, sec. Books, https://www.theguardian.com/books/2019/jul/27/the-disinformation-age-a-revolution-in-propaganda.
[26] Frank Cimatu, "The Marcos Victory: From the 3Gs to the 3Ns," *Rappler*, June 29, 2022, https://www.rappler.com/philippines/elections/solid-north-marcos-jr-victory-guns-goons-gold-new-media-nostalgia-negationism-part-5/.
[27] Reyes, "History Teaching, Thinking Development, and Transforming Society.", 177.

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multifaceted abilities of the learners that correspond to the multifaceted design and structure of different learning domains.[28] This means that it should fulfill specific goals through activities that are contextualized to the instructional environments present. Furthermore, to attain achievement in the academe, there are factors that influence the learners in executing a good performance in school.

One of the theories used in determining student achievement is Walberg's Theory of *Educational Productivity* which proposes the psychological characteristics of the learners and their environments affect their educational outcomes.[29] The nine components of *Educational Productivity* include student ability/prior achievement, motivation, age/developmental level, the quantity of instruction, quality of instruction, classroom climate, home environment, peer group, and exposure to mass media outside of school.[30] The study of Peng, Wang, Wang, and Lin on student achievement concluded that there is small relatability in terms of age on the meta-analyses of 680 cases of non-verbal reasoning and mathematics across a wide range of age groups.[31] However, a meta-analysis made by Jacob and Parkinson in school-age children in terms of working memory, flexibility, attention span, and inhibition of age did not vary in the age of the learners.[32] This is supported by the study conducted by Yeniad, et al. that argues that the relationship between flexibility and readings or mathematics does not vary with age.[33] Taking into consideration the aforementioned studies, age, as one of the indicators of academic achievement, might give an unclear suggestion or results in the study.

On the other hand, gender and education have had a long way of debate and discussion throughout history, some research identified that students'

[28] V.D. Suvarna and Ganesha Bhata, "A Study on Academic Achievement and Personality of Secondary School Students," *Research in Pedagogy* 6, no. 2 (2016): 99–108, https://doi.org/10.17810/2015.27.
[29] Arthur J. Reynolds and Herbert J. Walberg, "A Process Model of Mathematics Achievement and Attitude," *Journal for Research in Mathematics Education* 23, no. 4 (1992): 306–28, https://doi.org/10.2307/749308.
[30] Herbert J. Walberg, Barry J. Fraser, and Wayne W. Welch, "A Test of a Model of Educational Productivity among Senior High School Students," *The Journal of Educational Research* 79, no. 3 (1986): 133–39, https://doi.org/10.1080/00220671.1986.10885664.
[31] Peng Peng et al., "A Meta-Analysis on the Relation between Fluid Intelligence and Reading/Mathematics: Effects of Tasks, Age, and Social Economics Status.," *Psychological Bulletin* 145, no. 2 (February 2019): 189–236, https://doi.org/10.1037/bul0000182.
[32] Robin Jacob and Julia Parkinson, "The Potential for School-Based Interventions That Target Executive Function to Improve Academic Achievement: A Review," *Review of Educational Research* 85, no. 4 (December 2015): 512–52, https://doi.org/10.3102/0034654314561338.
[33] Nihal Yeniad et al., "Shifting Ability Predicts Math and Reading Performance in Children: A Meta-Analytical Study," *Learning and Individual Differences* 23 (February 2013): 1–9, https://doi.org/10.1016/j.lindif.2012.10.004.

achievement in terms of gender varies depending on the course they were taking. In the study conducted by Andreou, et al., female students performed better in syntax and semantics than males.[34] This supports the study of Hadjar, et al., wherein boys scored higher in mathematics and science, whereas girls scored higher in reading in primary school.[35] Moreover, it contradicts a meta-analysis study on gender and student achievement, which concludes that female students outperform male students in terms of academic achievement.[36] Additionally, female students do not only have high verbal competencies but can also outdo male students when it comes to aforementioned subjects, which defeat the stereotype that males are better in Science and Mathematics than females.[37] The gender disparity in student achievement has a social cost on one's academic effort.

Furthermore, socioeconomic status is also considered a factor affecting the students' achievement. Parson, Stephanie, and Deborah define socioeconomic status or SES as a term used to discern people's relative position in society in terms of family income, educational background, occupational prestige, and political power.[38] Throughout the years, SES is distinguished as a combined measure of an individual's economic and social position.[39] In essence, SES, clearly, has a huge impact on student achievement. According to El-Omari, students from high-income families are more likely to achieve high grades than students from low-income families.[40] This conclusion was supported by Barry, stating that students from low-income families are

[34] Christos Andreou, Evridiki Papastavrou, and Anastasios Merkouris, "Learning Styles and Critical Thinking Relationship in Baccalaureate Nursing Education: A Systematic Review," *Nurse Education Today* 34, no. 3 (March 2014): 362–71, https://doi.org/10.1016/j.nedt.2013.06.004.
[35] Andreas Hadjar et al., "Gender and Educational Achievement," *Educational Research* 56, no. 2 (April 3, 2014): 117–25, https://doi.org/10.1080/00131881.2014.898908.
[36] Daniel Voyer and Susan D. Voyer, "Gender Differences in Scholastic Achievement: A Meta-Analysis," *Psychological Bulletin* 140, no. 4 (2014): 1174–1204, https://doi.org/10.1037/a0036620.
[37] Mirta Blažev et al., "Predicting Gender-STEM Stereotyped Beliefs among Boys and Girls from Prior School Achievement and Interest in STEM School Subjects," *Social Psychology of Education* 20, no. 4 (December 1, 2017): 831–47, https://doi.org/10.1007/s11218-017-9397-7; Jan Retelsdorf, Katja Schwartz, and Frank Asbrock, "'Michael Can't Read!' Teachers' Gender Stereotypes and Boys' Reading Self-Concept," *Journal of Educational Psychology* 107, no. 1 (2015): 186–94, https://doi.org/10.1037/a0037107.
[38] Richard D. Parsons, Stephanie Lewis Hinson, and Deborah Sardo-Brown, *Educational Psychology: A Practitioner-Researcher Model of Teaching*, Educational Psychology: A Practitioner-Researcher Model of Teaching (Belmont, CA, US: Wadsworth/Thomson Learning, 2001).
[39] Saifullah Saifi and Tariq Mehmood, "EFFECTS OF SOCIOECONOMIC STATUS ON STUDENTS ACHIEVEMENT," *International Journal of Social Sciences and Education* 1, no. 2 (2011): 119–28.
[40] Abdallah Hussein El-Omari, "Factors Affecting Students' Achievement in English Language Learning," *Journal of Educational and Social Research* 6, no. 2 (May 10, 2016): 9.

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vulnerable to stress and conflicts at home because of their SES, which eventually affect their test scores at school.[41] Eamon, in a separate study, also states that the educational attainment of the parents significantly affects student achievement.[42] In conclusion, high-income families can provide facilities, resources, and access devices that will support their children's learning process. This postulates that students who belong to high-income families have more access to digital resources, resulting in positive educational outcomes.

With regard to measurement, there are various methods used by researchers to measure students' academic achievement. Survey questionnaires were formulated by the researchers and validated by scholars in order to find out the factors affecting the student achievement of Grade 11 students at Sultan Kudarat State University-Laboratory High School.[43] Other scholars maximize the reliability of grade point average or GPA in determining student achievement in order to assess the determinants of good academic performance,[44] while others relied on formal types of assessment like standardized examinations and achievement tests to investigate the inquiry-based learning method in students' achievement in science class.[45] Moreover, a quasi-experimental was designed to measure the student's achievement in a control and experimental group. Based on the findings, there is a significant difference in the achievement of the group who underwent the inquiry-based learning method and the group who underwent the traditional method. Given these findings, the researcher infers that the experimental group had a much greater perception of the information and questions that are essential to the research.

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[41] Jennifer Barry, "The Effect of Socio-Economic Status on Academic Achievement" (Wichita State University, 2006), https://www.proquest.com/docview/304977731.
[42] Mary Keegan Eamon, "Social-Demographic, School, Neighborhood, and Parenting Influences on the Academic Achievement of Latino Young Adolescents," *Journal of Youth and Adolescence* 34, no. 2 (April 1, 2005): 163–74, https://doi.org/10.1007/s10964-005-3214-x.
[43] Stephen Karl Briones et al., "Factors Affecting the Students' Scholastic Performance: A Survey Study | Briones | Indonesian Journal of Educational Research and Technology," *Indonesian Journal of Educational Research and Technology* 2, no. 2 (2022), https://ejournal.upi.edu/index.php/IJERT/article/view/41394.
[44] Mesfin Tadese, Alex Yeshaneh, and Getaneh Baye Mulu, "Determinants of Good Academic Performance among University Students in Ethiopia: A Cross-Sectional Study," *BMC Medical Education* 22, no. 1 (May 23, 2022): 395, https://doi.org/10.1186/s12909-022-03461-0; Saumya Kumar, Dr Monica Agarwal, and Dr Nimmi Agarwal, "Defining And Measuring Academic Performance of Hei Students-A Critical Review," *Turkish Journal of Computer and Mathematics Education (TURCOMAT)* 12, no. 6 (April 5, 2021): 3091–3105, https://doi.org/10.17762/turcomat.v12i6.6952.
[45] Ali Abdi, "The Effect of Inquiry-Based Learning Method on Students' Academic Achievement in Science Course," *Universal Journal of Educational Research* 2, no. 1 (January 2014): 37–41, https://doi.org/10.13189/ujer.2014.020104.

GBL and Student Achievement

GBL produces a feasible instructional method in order to develop the characteristics of the students to attain positive educational outcomes. A study conducted by Mayo on the effectiveness of video games for STEM disciplines in the USA, states that GBL provides a more remarkable increase in learning than the conventional way of teaching in meeting student interest, needs, pace of learning, and providing constructive feedback.[46] In support of this claim, Chang et al., in their study, the use of GBL displayed a significant increase in the academic achievement of the students, including the low performers' students due to the use of GBL in the class.[47] This suggests that problem-solving activities can develop or enhance with the assistance of technology to have a more essential learning process.

On the other hand, Giannakos investigated the factors affecting the learning performance of students in math through GBL, and shows no significant difference in the results of performance tests between GBL and conventional instructional method, as the researcher immersed the experimental group to GBL; while the control group engaged in the traditional method. However, the second part of the study investigates the enjoyment of the learners towards GBL, encapsulating their willingness to participate, active performance in the game, and enjoyment during gameplay. Results show that there is a positive correlation between enjoyment and active student participation.[48] Given all of these findings, the implementation of GBL in education provides a positive outcome on the academic performance and achievement of the students as it develops their higher-order thinking skills, problem-solving skills, and provides more opportunities to explore, analyze, and create while engaging in the GBL process, however, Spiress, et al. notes that incorporating merely one instructional approach cannot meet the needs of different types of learners.[49]

Conceptual Framework

[46] Mayo Mj, "Video Games: A Route to Large-Scale STEM Education?," *Science (New York, N.Y.)* 323, no. 5910 (January 2, 2009), https://doi.org/10.1126/science.1166900.
[47] Kuo-En Chang et al., "Embedding Game-Based Problem-Solving Phase into Problem-Posing System for Mathematics Learning," *Computers & Education* 58, no. 2 (February 1, 2012): 775–86, https://doi.org/10.1016/j.compedu.2011.10.002.
[48] Michail N. Giannakos, "Enjoy and Learn with Educational Games: Examining Factors Affecting Learning Performance," *Computers & Education* 68 (October 1, 2013): 429–39, https://doi.org/10.1016/j.compedu.2013.06.005.
[49] Hiller A. Spiress et al., "Problem Solving and Game-Based Learning: Effects of Middle Grade Students' Hypothesis Testing Strategies on Learning Outcomes," *Journal of Educational Computing Research* 44, no. 4 (2011): 453–72, https://doi.org/10.2190/EC.44.4.e.

Figure 1 shows the conceptual framework of the study wherein GBL is utilized in teaching Batas Militar through the use of Thinkific as the main learning management system (LMS). This LMS was considered to be the easiest to manipulate, in terms of this study's objective, as it has a built-in assessment tool, student access to their compiled scores, and a function to embed second-party websites. The embed function of Thinkific was particularly important as it allowed the researchers to easily incorporate and display games from Genially—an online application that was utilized to create interactive games about Batas Militar. With this feature, students were able to access all the instructional materials and learning activities in one platform—not having to open another tab in the web. This embed feature was not available with the other known and used LMS in the Philippines. Moreover, in terms of accessibility, the free plan of Thinkific enabled the researchers to launch the course without any initial fee, making it a viable choice for educators looking to test their content before committing to a paid plan.

For this study's framework, Thinkific, as an LMS, played an important role in the process; thus, it encompassed the other essential variable of the study. Additionally, the framework shows the relationship between the independent variables—GBL and the teaching of Batas Militar—and the dependent variables—test scores and student achievement. Test scores from the questionnaire will serve as an instrument to determine the scores of the participants in the study and whether learning took place as it served as an important indicator of academic progress. Finally, findings will be utilized to evaluate where there was a substantial difference in terms of the results between the post-test of teaching Batas Militar in the Philippines through the traditional setup and GBL activities.

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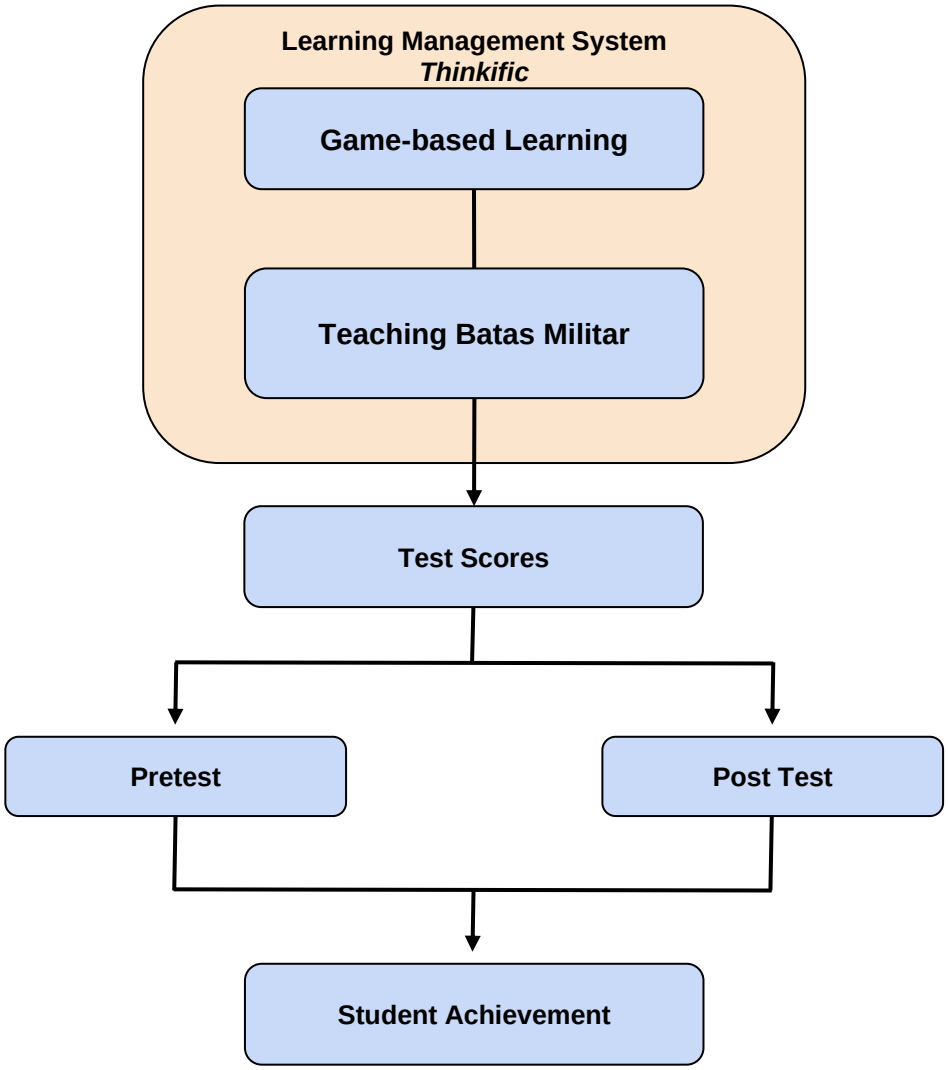

Figure 1. Conceptual Framework of the Study

Research Questions and Hypothesis

The purpose of this study is to explore the effectiveness of GBL in teaching Batas Militar, and its impact on student achievement of elementary students through the use of a learning management system (LMS). More specifically, this student intends to answer the following:

1. What is the demographic profile of the students between the controlled and experimental groups in terms of:
   a. Sex;
   b. Age;
   c. Household Income; and
   d. Digital Access

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2. Is there a significant difference between the post-test results of the controlled and experimental groups?
3. How do learners describe their learning experience using game-based activities?
4. How does game-based learning contribute to student achievement?

The hypothesis of the study is that there is no significant difference between the post-test results of the controlled and experimental groups in their student achievement.

Methodology

Research Design and Participants

This study employed a true-experimental research design to explore the effectiveness of GBL in teaching Batas Militar to student achievement of select grade 6 students of a laboratory school of a teacher education institution in the City of Manila. The true experimental research design is also known as the Pretest-Posttest Control-Group design where participants are randomly assigned either the experimental or control group. An intervention or treatment is given to the experimental group, while no treatment is given to the control group. At the end of the data collection, a post-intervention measurement, usually a test, or the post-test, is given to both groups to identify if the treatment had provided change in the experimental group to prove or disprove a hypothesis.[50]

Purposive selection of participants was employed due to the limited funding of the study. A total of 30 grade 6 students participated in the study, and the same sampling method was used to randomly select the respondents from which the controlled and experimental groups of equal quantities were formed. In this type of sampling, the decision on the inclusion of individuals in the sample relied on the judgment of the researchers based on various criteria such as level of knowledge, capacity, and/or willingness to participate in the study.[51]

The conduct of the Batas Militar lesson was in hybrid modality. For each week, there is a scheduled face-to-face session, and an asynchronous activity

[50] John Cresswell, *Research Design: Qualitative, Quantitative, and Mixed Method Approaches* (Thousand Oaks: Sage Publications, 2003).
[51] Neetij Rai and Bikash Thapa, "A STUDY ON PURPOSIVE SAMPLING METHOD IN RESEARCH" (2015), https://www.academia.edu/28087388/A_STUDY_ON_PURPOSIVE_SAMPLING_METHOD_IN_RESEARCH.

allotted. In facilitating the traditional modality of teaching Batas Militar, the two-hour face-to-face session utilized the Motivate, Explore, Discuss, Innovate and Assess (MEDIA) instructional model,[52] which was the required model used in the research site. The teacher assigned the initial activities, followed by a student-centered discussion and a test. On the other hand, GBL was conducted asynchronously via Thinkific, which also followed MEDIA with guided instructions. It contained educational videos, games about the lesson, and a test. In essence, the traditional modality was done synchronously with the presence of a teacher, while GBL was accomplished asynchronously by students.

Instrument

To determine the demographic profile and digital access of the students within the controlled and experimental groups, an online survey questionnaire was utilized. On the other hand, in order to gather critical data and information, a pre-test and post-test research instrument was employed, specifically designed for Grade 6 student-participants. The tests consisted of a total of 10 questions, 5 items for the pre-test and 5 items for the post-test about Batas Militar in the Philippines. This was intended to assess the level of learning acquired by the students, allowing the researchers to measure students' academic achievement in this specific learning topic which has been administered for both the controlled group (traditional face-to-face modality) and experimental group, through Thinkific, as the main learning management system (LMS) wherein GBL was showcased as the teaching method. The use of Thinkific in this research was based on its embed feature needed for the Batas Militar content and learning activities,and the free plan available for users who are testing the platform before committing to a paid subscription. Content and face validation of the instrument was performed by public school teachers handling Araling Panlipunan classes.

Data Analysis

In analyzing the data, the researchers utilized Google Sheets to lay out the gathered data properly. The raw data were cleaned, sorted, and analyzed through the following statistical treatments:

1. Frequency and Percentage

[52] Darryl Montebon, "Befriending the Foe: Towards an Instructional Model on Utilizing the Social Media in the Classroom," *International Journal of Research Studies in Educational Technology* 6, no. 1 (October 4, 2016), https://www.learntechlib.org/p/173830/.

This treatment was used to determine the demographic profile and the digital access of the respondents and to discuss the relation between GBL to student achievement.

Formula: $\% = \frac{F}{N} \text{x } 100$

Where: **%** is the percentage
F is the frequency
N is the total number of respondents
100 is a constant value

2. Paired T-Test

This treatment was used to determine the significant difference between the post-test results of the controlled and experimental groups.

Formula: $t = \frac{\Sigma d}{\sqrt{\frac{n(\Sigma d^2)-(\Sigma d)^2}{n-1}}}$

Where: t is the paired t-test result
d is the difference per paired value
n is the number of samples

Composition of the pairing of the respondents on the T-Test

The pairing of respondents for the T-Test was based on the alphabetical arrangement of their surnames to ensure a balanced representation of both sexes. The researchers created two separate lists, one for males and one for females, each arranged alphabetically. Respondents were then distributed alternately between the control and experimental groups starting with the male, and once ended, the female list began. In A, as shown in table 1, the first male was assigned to the control group, and the second male was assigned to the experimental group. This alternating pattern continued until all males were assigned in G. The same process was applied to the females that started with H, starting with the first female assigned to the control group and the second female to the experimental group.

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Table 1. Composition of the Pairing of Respondents

ID	Controlled	Experimental	Total by Sex
A	Male 1	Male 2	
B	Male 3	Male 4	
C	Male 5	Male 6	
D	Male 7	Male 8	14
E	Male 9	Male 10	
F	Male 11	Male 12	
G	Male 13	Male 14	
H	Female 1	Female 2	
I	Female 3	Female 4	
J	Female 5	Female 6	
K	Female 7	Female 8	16
L	Female 9	Female 10	
M	Female 11	Female 12	
N	Female 13	Female 14	
O	Female 15	Female 16	
Total	15	15	30

Results and Discussions

The study yielded the following results in exploring on GBL's effectiveness in teaching Batas Militar in the Philippines through the use of LMS.

Sex, Age and Household Income of Student-Participants

A sample of 30 students from Grade VI Malikhain was divided into 16 female students (53.33%) and 14 male students (46.66%). As depicted in table 2, only one (1) student (3.33%) with an age of 10 years has a household income of Php 10,957 - Php 21,914 per month. Similarly, there are two (2) female students aged 12 years (6.66%), two (2) male students aged 11 years (6.66%), and four (4) male students aged 12 years (13.33%) who have a household income ranging from 10,957 - Php 21,914 monthly.

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Table 2. Demographic Profile of Student-Participants based on Sex and Household Income

Household Income	Female					Male					Σ
	Age					Age					
	10	11	12	13	Total	10	11	12	13	Total	30
Php 10,957 - Php 21,914	1	-	2	-	3	-	2	4	-	6	**9**
Php 21,915 - Php 43,828	-	2	3	-	5	-	2	1	-	3	**8**
Php 43,829 - Php 76,699	-	4	2	-	6	-	2	1	2	5	**11**
Php 76,700- Php 131,484	-	2	-	-	2	-	-	-	-	0	**2**
Total	**1**	**8**	**7**	-	**16**	-	**6**	**6**	**2**	**14**	**30**

Note: Household income bracketing was adapted from Jose Ramon Albert et al., "Poverty, the Middle Class, and Income Distribution amid COVID-19" (Philippine Institute for Development Studies, August 2020), http://pids.gov.ph/publication/discussion-papers/poverty-the-middle-class-and-income-distribution-amid-covid-19.

Following the next option, there are two (2) female students aged 11 years (6.66%), three (3) female students aged 12 years (10%), two (2) male students aged 11 years (6.66%), and only one (1) male student with an age of 12 years (3.33%) whose family earns a household income of Php 21,915 - Php 43,828 per month.

As for the majority, there are four (4) female students aged 11 years (13.33%), two (2) female students aged 12 years (6.66%), two (2) male students aged 11 years (6.66%), one (1) male student aged 12 years (3.33%), and two (2) male students aged 13 years (6.66%) have a monthly household income of Php 43,829 - Php 76,699. On the other hand, the smallest number of only two (2) female students aged 11 years old (6.66%) have a household income of Php 76,700 - Php 131,484 monthly.

Digital Access of Student-Participants

The results revealed that all of the student-participants had 100% access to digital technology with a total number of 30 as can be gleaned in table 3. In

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relation to this, table 4 reveals that 83.33% of the participants answered that they have access to fixed internet at home with a total number of 25 students. While 13.33% are using pocket Wi-Fi and broadband internet which amounts to 4 students in total. The remaining student (3.33%) use prepaid or mobile data to suffice the digital needs of education.

In terms of the availability of gadgets, table 5 presents that the majority of the respondents utilized laptops (63.33%), smartphones (60%), desktops (43.33%), and tablets (36.67%) in learning social studies-related content and activities. There were also some students who employed the use of television (6.67%).

Table 3. Use of ICT Devices (e.g., desktops, laptops) in learning Araling Panlipunan

	Frequency	Percentage (%)
Yes	30	100.00
No	0	0.00

Table 4. Type of internet access in learning Araling Panlipunan

	Frequency	Percentage (%)
Fixed Internet at Home	25	83.33
Prepaid/Mobile Data	1	3.33
Pocket Wi-Fi	4	13.33
Internet Access Outside of the home via relatives, friends, neighbors	0	0.00
Community Internet with fee (internet café, computer/internet shop, etc.)	0	0.00
Free Community Internet (public spaces, barangay, malls, etc.)	0	0.00
No Access	0	0.00
	30	100.00

Table 5. ICT devices used in learning Araling Panlipunan

	Frequency	Percentage (%)
Desktop	13	43.33
Laptop	19	63.33
Smartphone	18	60.00
Tablet	11	36.67
Television	2	6.67
None	0	0.00
	63	210.00

Digital access plays a vital role in enhancing the learning experience and outcomes in social studies education. Access to digital platforms allows students to engage with primary sources, historical documents, and multimedia materials that provide firsthand accounts and different perspectives on historical events.[53] These resources enable students to critically analyze and evaluate information, develop historical thinking skills, and cultivate a deeper understanding of the complexities of social studies topics. With the help of this integrated method, students were able to grasp a deeper understanding of the topic of Martial Law using online GBL alongside assistive videos from the National Historical Commission of the Philippines (NHCP). Each video has a corresponding game with questions regarding the video clips they have watched. Following the instructional model MEDIA. the researchers designed the Batas Militar lesson in such manner: In the Motivate and Engage parts, the students were able to play "*Maze-tial Law*", a motivational game-based activity that was constructed by the researchers after a recap video entitled "*Proclamation 1081: Martial Law*". In the Discuss part, the learners were tasked to watch three videos regarding the political, economic, and social challenges during Martial Law. The first video, entitled "*Lipunang Papel*", was followed by a *Lakbay-Aral* game; the second video, entitled "*Ang Totoong Kuwento ng OFW*" was followed by an airplane-themed game; while the last video, entitled "*Parusa't Kasalanan*" was partnered with a bomb-themed game, relating it to the bloody tortures during the aforementioned era. Tables 6 and 7 shows the synopsis of videos shown and the description of the learning activities employed, respectively.

[53] David Hicks et al., "Guidelines for Using Technology to Prepare Social Studies Teachers," *Contemporary Issues in Technology and Teacher Education* 14, no. 4 (December 2014): 433–50.

Table 6. Videos used in the Batas Militar lesson

Title	Synopsis
Proclamation 1081: Martial Law	This 1-minute and 28-second video from the National Historical Commission of the Philippines (NHCP) provides a concise overview of Martial Law with details about its causes, effects, duration, and statistical data, including the number of casualties, instances of torture, and mass arrests that occurred during this period.
Lipunang Papel	This 2-minute video, titled "Lipunang Papel," delves into the political landscape during Martial Law. It discusses how Ferdinand Marcos Sr. seized control of all government branches, accumulated personal wealth through systematic corruption, and the political repercussions of his authoritarian rule.
Ang Totoong Kuwento ng OFW	"Ang Totoong OFW" is a 3-minute video that explores the economic struggles experienced by Overseas Filipino Workers (OFWs) during Martial Law. It narrates the story of a Filipina named Evelyn Calugay, who left for Canada in 1975 to support her family during an economic crisis. Exploitation and social challenges endured were the anchoring themes of the video.
Parusa't Kasalanan	"Parusa't Kasalanan" is a 3-minute video on the story of Fr. Ben Alforque, a Filipino priest and Martial Law victim from Cebu, who was illegally detained and tortured by the military for his work on social justice. Stripped of his freedom and dignity, his only solace came from a watch given by his parents. His experience highlighted the severe collapse of social and moral values during this oppressive period.

Sources: *Proclamation 1081: Martial Law*, 2016, https://www.youtube.com/watch?v=bDJXLfudwL8; "Lipunang Papel - YouTube," https://www.youtube.com/watch?v=BqEd8GKn4-I; *Ang Totoong Kuwento Ng OFW*, 2017, https://www.youtube.com/watch?v=20m-8w_FMQw; *Parusa't Kasalanan*, 2017, https://www.youtube.com/watch?v=cpSw3sYlnkk.

Table 7. Learning Activities/Games used in the Batas Militar Lesson

Title of Activity	Description
Maze-tial Law	In this maze game, students are tasked with answering questions based on the video content. The answers (A, B, C, D) are placed at different points in the maze. Players use the arrow keys to lead their character toward the correct answer while avoiding enemy obstacles.
Lakbay-Aral	In this activity, students engage in a journey-based game where they must visit three destinations linked to Martial Law, such as Swiss bank accounts tied to corruption (Switzerland). Progression in the game is contingent on correctly answering questions about the video, highlighting key political events and challenges faced during Martial Law.
Memory (P)Lane	In this game, students control an airplane, steering it through clouds labeled with various economic challenges faced by Filipinos during Martial Law. The objective is to choose clouds with statements that accurately reflect the issues discussed in the video.
Truth Bombs	In this activity, students must answer questions based on the video content; if they choose the wrong answer, a bomb explodes, symbolizing the brutal tortures experienced during Martial Law.

Post-test Results of Controlled and Experimental Groups after GBL Intervention

As shown on table 9, even after GBL was implemented, there was no statistically significant difference between the experimental and control groups in the post-test discussions, which suggested that the GBL intervention did not produce any appreciable differences in the outcomes or standard of the post-test discussions between the two groups. This result suggests that in this particular study, the use of GBL alone may not have had

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a substantial effect on the latter exam. On the other hand, there is a statistically significant difference in the pretest of the experimental and control groups, which were before the implementation of GBL as shown in table 8.

Table 8. Paired T-Test Results between Pretest Results of the Controlled and Experimental Group

ID	PRETEST	
	Controlled	**Experimental**
A	0	0
B	0	5
C	3	4
D	4	3
E	0	2
F	4	4
G	0	4
H	2	5
I	3	4
J	2	0
K	0	4
L	3	3
M	3	4
N	3	4
O	4	4
Paired T-Test Results		**0.02664376273 <0.05**

Table 9. Paired T-Test Results between Post-test Results of the Controlled and Experimental Group

ID	POST-TEST	
	Controlled	**Experimental**
A	4	5
B	3	3
C	4	4
D	3	4
E	3	3
F	5	4
G	3	5
H	5	5
I	4	3
J	2	5
K	3	5
L	5	3
M	3	5
N	4	5
O	4	4
Paired T-Test Results	**0.1498839559 > 0.05**	

Parallel with the research administered by Giannakos investigating the factors affecting learning performance in math ability through game-based learning shows no significant difference in the results of performance tests between game-based learning and conventional instructional method, as the researcher from an experimental group that immersed to game-based learning while the control group engaged in the traditional instructional method.[54] This suggests that it is crucial to examine potential causes for this lack of a noticeable difference. The findings may have been influenced by elements like the particular design of the GBL intervention, the games used, the length and rigor of the intervention, or the characteristics of the participants. Additionally, other elements may have been at play, like the students' prior knowledge, their motivation, or the teaching techniques used during the post-test.

[54] Giannakos, "Enjoy and Learn with Educational Games.", 438.

Learning Experience of Students in Using GBL Activities

When it comes to the perception of Grade 6 students on their experiences in utilizing GBL, a majority of 14 out of 15 students (93.33%) perceived their experience in GBL activities as entertaining. This is followed by 11 students (73.33%) who described their experience as engaging, then a total of 9 students (60%) who described their experience as informative.

These positive perceptions can be linked with the study of Dr. Ming-fong Jan, which explains the rationale behind GBL in education with (1) *motivation as one of the three major drives for learning*. This was manifested in the travel-themed layout of the LMS and the featured games in every section (from Motivate to Assess) which integrated elements of fun in order to capture the interest of the learners. This is along with (2) *content mastery, through allowing the learners to play all the games repetitively to offer opportunities for drill and practice*, and (3) *higher-order thinking and social skills* which can be employed through a problem-solving approach and practical application to cultivate critical thinking and collaboration.[55] This part was shown in the Innovate section, wherein the students were presented with the two faces of Martial Law from the perspectives of fellow children. After watching the assistive videos, they had to accomplish the gamified Venn Diagram to analyze the opposite sides of the narratives. This section allowed the learners to examine biases, evaluate evidence, and weigh different perspectives on the given issue.

GBL On Student Achievement

In terms of the effectiveness of GBL on student achievement, the results revealed that the majority of the test scores (53.33%) have increased in comparison to their pre-test and post-test scores. On the other hand, 33.33% of the test scores were retained while 13.33% decreased.

In this regard, these findings reinforce the study by Chang et al. whereas the use of GBL in teaching classroom topics significantly contribute to an increase in the student's achievement.[56] On this account, the development of activities that triggered problem-solving and critical-thinking skills is essential to the learning process. Furthermore, these also supported the claim of Mayo whereas GBL provided a remarkable increase in learning compared to the conventional or traditional teaching and learning modality.[57]

[55] Jan, "A Literature Review of Game-Based Learning."
[56] Chang et al., "Embedding Game-Based Problem-Solving Phase into Problem-Posing System for Mathematics Learning.", 784.
[57] Mj, "Video Games."

Conclusion and Recommendations

Digital accessibility is integral for game-based learning because it provides students with the equipment and resources they need to engage in immersive educational experiences. According to the study of Squire, digital access allows students to interact with educational games and simulations, which promotes active learning and improves students' grasp of complicated subjects.[58] However, the research findings suggest that there was no direct relationship between the use of traditional and game-based approaches during the pre and post-test of the students. Thus, to comprehend why the GBL intervention did not result in appreciable variations in the post-test, additional research is required. In order to improve the efficiency of game-based learning in encouraging meaningful and in-depth post-test discussions in the context of social studies or other academic domains, this could entail looking at the specific components of the approach, taking the implementation process into account, or looking into alternative instructional strategies.

On the other hand, it became evident that a game-based approach provided a positive impact on the student's acquisition of the topic of Batas Militar. It is shown that positive emotions were reinforced after taking the game-based activities of the researchers; students are entertained, engaged, and informative. Moreover, student achievement becomes prevalent throughout the duration of a game-based routine. In conclusion, the research demonstrates that game-based learning has a favorable impact on student accomplishment, making it an effective educational strategy.

As stemmed from the results and discussion, the proposed recommendations for the improvement of GBL are as follows:

1. Increased support for GBL. With the similar importance of traditional learning and GBL as emphasized by Magnacca, there is a need for the Department of Education (DepEd) and private educational institutions to allocate increased funding for the utilization of premium game technologies.[59] This is to provide teachers with technological support that could improve the application of GBL into the lessons of Social Studies; and on the other hand, make GBL available and hassle-free for learners.

[58] Kurt Squire, "From Content to Context: Videogames as Designed Experience," *Educational Researcher* 35, no. 8 (November 1, 2006): 19–29, https://doi.org/10.3102/0013189X035008019.
[59] Magnacca, "Game-Based Learning in the Social Studies Classroom."

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2. Digital Accessibility both on the software and hardware. Provided that GBL can only be accessed with functional devices and a stable internet connection as necessary equipment, the DepEd and private educational institutions must provide the learners and teaching personnel with laptops and/or tablets. In addition, there is a need for the National Government and Local Government Units (LGUs) to provide better technological support, especially when it comes to internet and signal quality.

3. Further research on GBL. As evident in the literature review, there is a limited availability of studies that focus on the application of GBL in the Philippine context. This calls for future researchers to explore the national and/or local application of GBL in teaching history, particularly, Philippine history, for further review and development. ✷

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