Chapter 2

Review of Related Literature and Studies

Foreign literature

A study done with Kindergarteners Din & Calao, (2001) Showed that students who played educational online games on the Sony Light span, which is a game system similar to the Sony PlayStation One, made significant increases over the control group in the learning of spelling and reading; however, no significant gain was made over the control group in math. This suggests a facilitative role of playing online games in developing verbal skills (2001). Smyth (2007) suggested that complex games may lead to academic success by engaging players in problem solving, critical thinking, and creativity.

According to Birgit Schmitz, Roland Klemke, Marcus Specht(2012) within the past decade, a growing number of educational scientists have started to recognise the multifaceted potential that mobile learning games have as a tool for learning and teaching. This paper presents a review of current research on the topic to better understand game mechanisms with regard to learning outcomes. The purpose of this paper is twofold. First, we introduce a framework of analysis which is based on previous work on game design patterns for mobile games and on learning outcomes. The framework focuses on two aspects, motivation and knowledge gain. Second, we present a set of patterns which we identified in the literature and that positively influence these two aspects. Our results support the general assumption that mobile learning games have potential to enhance motivation. It reveals that game mechnisms such as Collaborative Actions or Augmented Reality provide incentive to get engaged with learning and/or a certain topic. With regard to knowledge gain, results are less comprehensive.

According to Lina Lafta Jassim, Hisham Dzakiria(2019) Digital games play a significant role in the life of the new generation. Although there are many criticisms, many

studies focus on the importance of digital games in improving learner's vocabulary in the target language. Researchers have begun conducting several researches on how using games in the class can foster vocabulary learning. The aim of this paper is to investigate the impacts of digital games on children's vocabulary learning depending on a literature review. Many studies focus on the impacts of digital games on different aspects of education.

Local literature

According to the study of "Mixed Up E-games", (Michael Detablan., et. Al, ACLC Taguig October 2013) the project has different categories: different shapes, math games, colouring games, typing games and more. By creating various games that are fun yet educational, kids can learn skills like problem-solving and boosting creativity so they'll have advance learning before they go to school. Parents also benefit from it since they don't have to persuade their children to learn new things. By letting the kids play educational games, they will be able to acquire new skills or improve what they already have.

According to the article "The gamification of education Why playing is the future of learning" by Michael Logarta (June 11, 2014), students can benefit more in gamification of education rather than using traditional way of educating students. Gamification means using game mechanics to make teaching more interesting, motivating, casual and fun for students. So instead of restricting them from playing games, why not use certain games that can increase their knowledge, memorization and skills. Also, if lessons are given in a game-like manner, students would tend to remember it more than lectures that are stated in a news-like manner

According to the article "Mobile Learning" by Baran, Evrim (2014)Mobile devices have become attractive learning devices for education. While the majority of the existing research has focused primarily on the value of mobile learning for students, researchers have recently started exploring its potentials within teacher development. The present qualitative

synthesis of quantitative and qualitative research aimed to address trends and gaps observed in the literature regarding the integration of mobile learning into teacher education. Six main findings emerged☹a) there is an increasing trend in integrating mobile learning in teacher education contexts; (b)theoretical and conceptual perspectives are scarcely reported; (c) variations exist in perceptions, attitudes and usage patterns; (d) engagement with mobile learning and devices is primarily reported as being beneficial; € challenges were scarcely reported; and (f) several pedagogical affordances support mobile learning integration into teacher education settings. These finding shave been interpreted to determine their implications on the development of mobile learning experiences in teacher education, including programmatic directions for integration and study.

Foreign studies

Are games effective learning tools?

According to Sara De Freitas(2018) The literature around the use, efficacy and design of educational games and game-based learning approaches has been building up gradually and in phases, across different disciplines and in an ad hoc way. This has been problematic in a number of ways and resulted in fragmented literature and inconsistent referencing patterns between different sub-disciplines and countries. This is mainly because no distinct single-disciplinary perspective has emerged because of: the cross-disciplinary nature of educational games, a reliance on single-disciplinary contexts for studies, changing terminologies in different contexts and the use of multi-methodological approaches. Distinct perspectives from education science, game science, neuroscience and information science have deepened our understanding of play and games. This research has become more quantitative, rigorous and nuanced as a result of more studies focused upon therapeutic health applications of games, the serious games research movement and more efficacy and comparative studies that examine and

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Games For Growth; Educational Games in the Classroom

According to Alice Kaplan Gordon(1970) among the reasons for using games as a tool in education are that they motivate students, teach difficult concepts, give opportunities to make decisions and solve problems, and give usually poor students a change to take the lead in class. Games now available from producers, most designed for use in social studies classes, are described here in detail. The teacher's role in the game, especially in the important debriefing session, where lessons of the game are made explicit, is explained. Suggestions for designing games and adapting existing games to new situations are given. A section on evaluating the learning impact of games notes that while games are not more effective than other teaching methods, they often teach processes, rather than facts, and they are just about the only medium teaching this. A supplementary section describes games for exploring attitudes of students, teachers, and community members.

Local studies

Exploring Philippine Traditional Games as Motivational Activities for Learning

According to Tupas, Fernan P.; Palmares, Ma. Theresa G(2018) this study aimed to explore the possibility of tapping traditional games as motivational activities that can aid in the teaching of the sciences in the K-12 curriculum and eventually will help learners increase their interest as well as performance in science. Method: This study is a qualitative research that aims to gather an in-depth understanding of science ideas, concepts and practices in Philippine traditional games. The purposively selected respondents of this study were comprised of the top 1 pupils and students from Grades 3 to Grade 10 from various schools. The respondents were invited every weekend to play one traditional game, and to observe their classmates and friends play during free time. These students were interviewed using the conversation analysis method wherein the Hiligaynon dialect was translated into English. This was tape recorded and responses related to science were extracted and triangulated and then were themed into four major science topics such as Earth Science, Biology, Chemistry and Physics. Findings: The study found that scientific ideas and concepts were embedded in the Philippine traditional games and can be used as instructional materials in teaching and learning science in K - 12 Basic Education Program of the Department of Education. With the inclusion of these traditional games, learners will become more interested in learning science. Significance: An instructional material using traditional games was formulated to be used in teaching science curriculum in basic education program. This is to help below average learners understand and appreciate science learning.