

Development of Contextualized Game-based Pedagogy based on Teachers and Students Perception on the Use of Game in Teaching Social Science

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Abstract

The use of game as pedagogy in teaching social science could be effective if contextualization will be considered, hence this study was conducted to assess its usage as viewed by the teachers and students among select autonomous schools in the province of Eastern Samar, Philippines. This study used sequential explanatory mixed method which combines both quantitative and qualitative research aspects. For the quantitative, a quantitative descriptive survey was administered to 10 teachers, where purposive sampling was used and 384 students with the use of a two stage stratification sampling technique. For the qualitative, a key informant interview was conducted to 10 teachers and students of the same school in order to substantiate the responses of the respondents from the survey questionnaire. Responses were analyzed through the use of the Median as a measure of summarizing quantitative data. It was revealed that both teachers and students have exhibited strong agreement that the use of game in teaching social science subjects has to be flexible, recent, suitable, clear and impartial. Meanwhile, parameter on effectiveness was only strongly agreed by the teachers. On the qualitative aspect, after the viewpoints of the participants were transcribed, translated, coded and analyzed thematically, it was noted that in using game as pedagogy in teaching social science, noise should be minimized, students should not be exhausted physically, there should have clear point system, should not consume more time and technology must be utilized. With the combined quantitative and qualitative result, a contextualized game-based pedagogy was developed which is highly recommended for the social science teachers to use in order to enhance the teaching and learning classroom experiences.

Keywords: *contextualized, game-based, pedagogy, social science, technology*

BACKGROUND OF THE STUDY

It is a known fact that children are engaged in learning if they see it as enjoyable as possible wherein they could play and explore. In fact the strategy that could dramatically change the role of teachers is the use of the educational games. In this note, using games has its importance in attaining learning (Bilton, 2002). Individual studies have shown, that games which are well crafted can promote better understanding through which science knowledge is formulated and can produce change in players' willingness and desire to engage in scientific practices and discourse (Johnson, 2010). With the advent of technology anything latest the world could offer is at the finger tip of the teachers, it makes everyone aware of what will be the interest of the young ones, constant interaction of this technology makes anyone equipped in dealing the complexities (Prensky, 2001)

The problem now rest on those who are in charge of transmitting the learning to the students, and they are the teachers (Baker et. al., 2009). They are always being dictated on the kind of pedagogy to use for the learners to learn better which defy the reality that they should be the one to decide on what is best for their students for they have this close contact to them (Berns et. al., 2001).. But this should not take away the need of listening to their needs (Bond, 2004). Everyday has always been a battle for them and with the span of time that they are in their position they know the necessary tool in beating ignorance in a gentle way (Greeno, 2009). Thus, considering their point of views is crucial for at the end of the day they are the one who will use such pedagogy.

On the part of the students, they are more exposed in the modern world, their participation is minimal in classroom discussion for they get bored easily (Williams 2017). In order to beat the negative perception of students to the social science subject, an idea of using game was introduced and is widely used among social science teachers (Allysop, 2015). But on the execution of such pedagogy becomes a problem for it is not contextualized and is not really what the teachers and students want, though injecting games caters to the need of the students but the problem on administering is still evident (Perin et. al., 2010).

Thus, contextualization of game based pedagogy is the answer, because it is a key component of quality instruction that encourages teachers to start their instructional planning with real-life contexts (Rivet et. al, 2008). This focuses on the active application of acquired skills and knowledge in a context, rather than focusing only on the possession of basic skills and knowledge, hence contextualized instruction aimed directly at developing the skills and knowledge that adult and youth learners need in order to deal with specific situations or perform specific tasks in their everyday lives (Lubrica et.al, 2018).

It is in this view that the researcher come up with a study of contextualizing the game-based pedagogy by considering the opinion of both the teachers and students, and eventually, coming up with a game-based pedagogy squeezed out from what the teacher and students wants and needs. For instruction on the part of the teacher and learning on the part of the students are best achieved if it will be catered according to its specific taste and context (Son et. al., 2009).

This study could be a solution for it focuses on giving importance on the opinion of teachers and students on what they want for a game-based pedagogy. All their responses will be consolidated and pair it with each other and meet at a common consensus which will be the basis of coming up with a contextualized game-based pedagogy.

Contextualized in the since that the idea on how it is being administered came from them, that sense of possession is evident. This will result to the use of the pedagogy with ease and comfort thus making a difference in the teaching and learning process. This will not only cater the need of the students but to the teachers as well, a reason why instruction will be improved and eventually students' academic performance will be enhanced.

OBJECTIVES OF THE STUDY

The study assessed teachers and students perceptions on and their viewpoints of using game as pedagogy in teaching social science subjects in order to contextualize a game-based pedagogy.

Specifically, the study has the following objectives:

1. To assess the degree of agreement on using game as pedagogy in teaching social science subjects among Junior High School Teachers as to the following qualities/elements:

- | | |
|----------------------|-----------------|
| a. Usability | g. Convenience |
| b. Adaptability | h. Suitability |
| c. Resource-friendly | i. Clarity |
| d. Flexibility | j. Impartiality |
| e. Recency | k. Time |
| f. Effectiveness | |

2. To assess the degree of agreement on using game as pedagogy in teaching social science subjects among Junior High School Students as to the following qualities/elements:

- | | |
|----------------------|-----------------|
| a. Usability | g. Convenience |
| b. Adaptability | h. Suitability |
| c. Resource-friendly | i. Clarity |
| d. Flexibility | j. Impartiality |
| e. Recency | k. Time |
| f. Effectiveness | |

3. To explore the viewpoints of the Junior High School Teachers and Students on the use of games as pedagogy in teaching Social Science subjects.

4. To develop a contextualized game-based pedagogy for the Junior High School Teachers and Students based on their responses on the given parameters and viewpoints on the use of game in teaching social science subjects .

METHODOLOGY

Research Design

This study used Sequential Explanatory Mixed Method which started first with Quantitative and then followed by Qualitative Method. For the Quantitative aspect, a Descriptive Survey was used implementing a Survey Questionnaire distributed to the respondents. For the Qualitative, Key Informant Interview was used to substantiate the responses of the respondents from the items in the parameters of the survey questionnaire.

Research Locale

The study was conducted at Eastern Samar National Comprehensive High School, an urban autonomous school located in the City of Borongan to 10 junior social science teachers and 384 junior high school students in the descriptive quantitative survey.

Ten teachers and students were utilized as the participants in the Key Informant Interview.

Sampling Procedure

For the teacher respondents, Purposive sampling was used wherein all the teachers handling social science subjects were considered but only those with the experience of using game in teaching social science subjects were utilized.

For the student respondents, only those handled by the teacher respondents were utilized. A two-stage Stratified Random sampling was used. The first stage is getting stratum size in each grade level and the second stage is the stratum size of each section, from there, random sampling was employed.

10 participants were taken from both the teachers and students until the point of saturation for the Key Informant Interview.

Analysis of Data

The responses of the respondents on the idea of using of game as pedagogy in teaching social science subjects was tabulated and were analyzed descriptively. Median was employed since the scale of measurement of the data is ordinal. Items with a response higher than neutral were considered and items lower were discarded in the formulation of contextualized game-based pedagogy.

The result of the quantitative descriptive survey was substantiated with the viewpoints and insights of the teachers and students in the KII. The qualitative data were transcribed. Codes and categories were identified and themes were subsequently developed to facilitate the thematic analysis of the qualitative responses of both students and teachers. Their views and opinions in terms of using game as pedagogy in teaching social science were incorporated.

Based on the responses of the teachers and students on the given parameters and the result of the KII, a Contextualized Game-based pedagogy was developed.

RESULT

Teachers and Students Agreement on Qualities/Elements for Game-based Pedagogy

This section presents the result and analysis of data obtained from the study conducted which assessed the idea of using game as pedagogy in teaching social science subjects among teachers and students of Eastern Samar National Comprehensive High School.

Table 1. *Teacher's Idea on Using Game in Teaching Social Science Subjects*

Parameters	Mode	Interpretation
Usability	4	Agree
Adaptability	4	Agree
Resourcefulness	4	Agree
Flexibility	5	Strongly Agree

Recency	5	Strongly Agree
Effectiveness	5	Strongly Agree
Convenience	4	Agree
Suitability	5	Strongly Agree
Clarity	5	Strongly Agree
Impartiality	5	Strongly Agree
Time	4	Agree

Table 1 shows that parameters such as Flexibility, Recency, Effectiveness, Suitability, Clarity and Impartiality on the use of game in teaching social science subjects were strongly agreed by respondents as supported by a median of 5. This result implies that teachers strongly agree that using game in teaching social science subjects must be flexible, recent, effective, suitable, clear and impartial. In addition, parameters like Usability, Adaptability, Resourcefulness, Convenience and Time got a median of 4 and are interpreted as Agree. This means that the teachers agree that the use of game in teaching social science subjects should be usable, adaptable, resourceful, convenient and time conscious. This findings clearly implies that their agreement should be incorporated in a game-based pedagogy, this was supported by Pritchard (2005) in which he pointed out pedagogies are ways for instructors to shift the focus of education away from the policy makers and into the hands of teachers for they are the one actually experiencing the real classroom setting. Moreover, he contended that there is no one-size-fits-all pedagogy and that different viewpoints must be considered. Thus, the significance of contextualization is esteemed most if teachers are able to use a pedagogy when teaching in which the idea came from them (Korkmaz et. al. 2013).

Table 2. *Student's Idea on Using Game in Teaching Social Science Subjects*

Parameters	Mode	Interpretation
Usability	4	Agree
Adaptability	4	Agree
Resourcefulness	4	Agree
Flexibility	5	Strongly Agree
Recency	5	Strongly Agree
Effectiveness	4	Agree
Convenience	3	Neutral
Suitability	5	Strongly Agree
Clarity	5	Strongly Agree
Impartiality	5	Strongly Agree
Time	4	Agree

Table 2 projects that the median in parameters such as Flexibility, Recency, Suitability, Clarity and Impartiality was 5 which is interpreted as Strongly Agree. It can be further inferred from these responses that student respondents strongly agree that the use of game in teaching social science subjects must be flexible, recent, suitable, clear and impartial. Furthermore, parameters such as Usability, Adaptability, Resourcefulness, Effectiveness and Time got a median of 4 and was interpreted as Agree. These responses of the students means that the use of game as pedagogy in teaching social science should be usable, adaptable, resourceful, effective and time conscious. This only goes to show that academic learning should be in a context that is of interest to students, and they are simultaneously applying and learning new skills (N. Badway, personal communication, October 1, 2010).Moreover, Classroom based measures of teaching effectiveness are related in substantial ways to student achievement growth (Kane et al., 2010). However, Convenience as a parameter got a median of 3 and was interpreted as Neutral. This result indicates that the students neither agree nor disagree that the use of game as pedagogy in teaching social science has to be convenient.

Teachers and Students viewpoints on the Utilization of Game-based Pedagogy

Viewpoints of students and teachers relative to the use of Games as Pedagogy in Teaching Social Science subjects were sought such as the problems they encountered in using game as pedagogy and their perceived considerations in using game as pedagogy.

Teachers

The first question raised to the teacher-participants dealt on the reasons why they use games as a pedagogy in teaching social science. The responses centered on labelling the subject as boring, that is why in order to beat the negative perception of students to the social science subject, an idea of using game was introduced and is widely used among social science teachers (Allysop, 2015). They also identified the strategy of using games in teaching the subject that it fosters interest and motivation among the students, it is flexible and could be used to teach almost all the subjects which calls for active engagement (Moyles, 2005).

“Teaching social science is boring, not all student are interested in your topic all the time. With the use of game the students become interested and they enjoy it for they can connect to the topic.” (participant #2)

“It serves as a motivation for students to pay attention and to get excited it is because games catch the interest of the students. (Participant#7).

Other responses emphasized that the use of games in teaching social science subject encourages more participation and knowledge retention among the learners because it provide positive features, such as it lighten the mood and facilitates greater creativity while boosting student morale and interest (Schuna, 2011).

“With the use of game, student became more participative because when I am just discussing the topic, the student became bored.” (participant #6)

“...with the use of game, the knowledge is retained in their brain even if it will be asked on the preceding week. That is how effective games are.” (participant# 1, line 2)

Another question raised was on the perceived contributions of games to the academic performance of students. The participants were in consensus that the use of games as pedagogy in teaching social science gained plausible results in relation to student’ academic performance, in fact, using games has it importance in attaining learning (Bilton, 2002) and it has its way of providing opportunities for students to dwell and inquire information in a fun and interactive way (Azriel, Erthal and Starr, 2005).

“...when we were introduced of using game, gradually the MPS of the students increases quarterly.” (participant#1, line 2)

“...the retention of knowledge is evident, a reason why they have high scores in the formative test” (participant #9)

Other participants added that aside from the visible impact of the use of games in teaching social science, other skills are developed such as motor skills as well as their cooperation and teamwork. Moreover, Prensky (2011) stated that one of the few significant needs given with the use of game is social where there are cooperation n and collaboration (Markey, 2008).

“Their motor skills is being developed, since they like playing, they get what they want and at the same time they learn.” (participant #2)

“They develop cooperation and teamwork to learn and eventually to increase their grades.” (participant #4, line 4)

On the third question pertaining to the problems encountered using game as pedagogy in teaching social science, some participants stressed the corresponding noise the classes create while games are introduced since it calls for active engagement (Moyles, 2005), while some said there are instances that the strategy is time consuming. This was supported by Glendon and Ulrich (2005) that once the learner has started playing game, his goal is to finish it for he has started it already, he may not win it but at least he was able to finish and enjoying it, thus it consumes much of the time

“Sometimes it can destruct the adjacent classroom because of the noise of the students. Since we have just one hour per day for our period, it really consumes the time because the students are enjoying the game.” (participant 1, line 1)

Some participants observed also that employing the strategy was time consuming and some parts of the lessons were no longer tackled. When students and teachers start to focus more and rely too heavily in using games in everyday instruction, they risk losing the skills of the genuine intention or goal of the curriculum (Zafar, 2011).

“Time consuming. Children would like to play game always, a no ending game until it consumes the time. If I am administering game, other parts of the lesson is not attained. Sometimes it is messy, noisy.” (participant#7, line1)

The last question raised to the teacher-participants was their idea on how they would like game to be used or what considerations that a game must have as pedagogy in teaching social science. Some participants view the role of technology in introducing games in order to minimize the corresponding noise it creates in classes. With the advent of technology anything latest the world could offer is at the finger tip of the teachers, constant interaction of this technology makes anyone equipped in dealing the complexities (Prensky, 2001).

“It should just have smaller groups. One thing more is it could be more okay if there is technology involve, that is how it should be, that is what the students like, enough for the traditional, let us go for modern.” (participant#1, line 3)

While other participants agree on the contributions of game as strategy in teaching social science, some suggested that its use should be limited in order not to exhaust the students physically.

“There should have just an specific part in the teaching and learning process that a game must be conducted...not all throughout the period. Games must not be exhausting but then they should enjoy...” (participant# 7, line 1)

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Students

The first question raised to students was why do they like games as pedagogy used by their teachers in teaching social science. Majority of the student-participants emphasized that the advent of games as strategy in teaching the subject, the learning atmosphere became lively and participative. Students like game because there is fun in it (Street, 2002)

*“Because of game the classroom is lively, not boring a reason why I participate...”
(participant# 2, line1)*

Since some games involved tasks requiring groups, other participants claimed to have been honed with their leadership skills.

“I am able to share my leadership skills to others for other members don’t even bother to move, most of the time they are just waiting to lead. (participant#7, line 1)

Other participants were delighted with the corresponding prizes they obtain from winning in the games. Games provides immediate feedback on their performances if they had succeeded (Weil 2000).

“ I am excited with the prizes to the winners. It is just ok if grades will be used in giving prizes in a game...” (participant#10, line 1)

The second question asked was on the perceived limitations of games when used by their teachers in social science. Majority of the participants admitted that the game strategy made them noisy in class at times. Some even mentioned of commotions and disagreements that resulted from the groupings or the games they played. Schell (2011) pointed out that since each group plays own game, more often than not they are likely to encounter a completely different experience from someone playing the same game, thus making two different decisions.

“It is somewhat noisy sir and sometimes we are reprimanded because of it. We can’t help it but to be rejoice if we win....” (participant#, line 1)

“Others are exerting much of their effort but others are not. They are just waiting until We could earn points because of my effort, so disgusting and then in times of giving of points we all receive the same..” (participant#2. Line1)

“They are quarrelling that is why it last that long up to the time that the bell is ringing and we are not yet finished, it consumes much of the time for nothing.” (participant#6)

The third question focused on their insights regarding what else would the participants like on their teacher to incorporate in using games for teaching social science. Mostly expressed their concern on the clarity of the point system their teachers are using in giving them their evaluation for the games. But with the rules in games, it will create impartiality (Johnson, 2010)

“I just hope that there is clear and just bases like that of rubrics so that it is clear who earns the higher or lower points.” Participant#3)

Others emphasized their clamour for the use of technology along with the administration of games as a strategy in teaching.

“Technology please? It feels different if we have such thing...it gives excitement. I just hope that all classrooms have that..” (participant#10)

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CONCLUSION

Based on the finding of this study, the following conclusions were made:

1. For the teachers, it was strongly emphasized that the use of game in teaching social science subjects should be flexible, recent, effective, suitable, clear, and impartial.
2. For the students, it was strongly highlighted that the use of game in teaching social science subjects has to be flexible, recent, suitable, clear and impartial.
3. Games create noise and is time consuming that some parts of the lesson were no longer tackled. Thus using game as pedagogy in social science must use technology, minimize the noise it create and should not exhaust the students physically. Game creates noise in class at times and commotions as well as disagreements. With that, using game as pedagogy in teaching social science must have a clear point system and technology must be used.

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