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Correlation between Online Game Engagement and Attitude towards Online Classes among College Students of Davao delNorte State College

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ABSTRACT:

The world today is primarily comprised of technology. The emergence of the Covid-19 pandemic, in line with this, culminated in the change of classes from face to face to the online learning method. The study aims to evaluate the effect of online game engagement and attitude towards online classes among college students of Davao del Norte State College. The research will also determine the relationship between online game engagement and attitude towards online classes among Davao del Norte State College students. The study will also determine therelationship between online game engagement and online classes' attitudes towards Davao del Norte State College students. Data gathering was done through the use of questionnaires and an online survey. The participants came from the four institutes of Davao del Norte State College and were selected using quota sampling. Using the correlational research method, the study found a strong positive correlation and significant relationship between online game engagement and online class attitude among college students of Davao del Norte State College. College students based on the data collected from the 100 respondents. Also, the findings of the study show a high level of online game engagement. The attitude towards online classes will be bad, while if the student attitude towards online class is good, its perceived effectiveness is low among the student.

Keywords: Correlational Research, Online Game Engagement, Attitude towards Online Classes

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1. INTRODUCTION

1.1 Background of the Study

Today's world is one that is largely composed of technology. In a relatively short period, we have been immersed in a world of high-definition television, Facebook, YouTube, internet radio, "green" cars, outrageous thrill rides, 3-D technology, etc. But no area of technology has become as prominent as that of video gaming [1].

Computer games are considered an engaging leisure activity that invokes players' interest and even leads to a specific addiction level [2]. However, the influence of this useful machine on youth is undeniably questionable. According to Rock [3], these technologies are very good at distracting people. In line with this development, online gaming was created to give entertainment to people. Online gaming is one of the widely used leisure activities by many people. It may be

represented at the level of both an individual and a certain social group or community [4].

For most people, online gaming is one of the best pastimes that they acquire, especially for teenagers, youngsters, and students. According to Kuss & Griffiths [5], teens who play online games are just having fun. They do not just actually play because of seriousness, but also because they just want to feel relief. Students tend to feel stressed during school hours due to loads of school work, and playing will relieve their stress. It is undeniably questionable that playing online games provide them something that no one can give.

The fact that people live in an informative lifestyle where everything is updated, the Internet became one of the necessities of human beings regardless of age or sex in today's society. However, this useful machine's influence on youth is undeniably questionable, and Online gaming is one of the widely used for leisure activities [6]. Several studies in psychology have found out that increased time spent on the Internet can negatively impact a person's ability to communicate appropriately face-to-face with friends, peers, family members, including parents [7]. Studies revealed that the human brain is easy to destruct and one of the reasons is using technology. The education system tends to go with the flow with this constant change in society to get things relevant with the generations today [8].

Thus, this situation in our educational sector and the sudden shift of learning platforms brought different effects to student learning. This study evaluates the effect of online game engagement and attitude towards online classes among college students of Davao del Norte State College. The research will also determine the relationship of correlation between online games engagement and attitude towards online classes among college students of Davao del Norte State College.

1.2 Theoretical Framework

Several factors of student online learning readiness (OLR) are significant predictors of online learning. Technological elements and computer skills are important success factors for social interaction, social communication, and learning outcomes [9]. Situated Cognition theory, the second theory, is based on the premise that knowledge is formed and supported by an individual's cultural, social, and physical experiences and situations. Learning occurs in an individual's everyday life experiences, and the theoretical model emphasizes an authentic context for skill acquisition [10].

1.3 Conceptual Framework

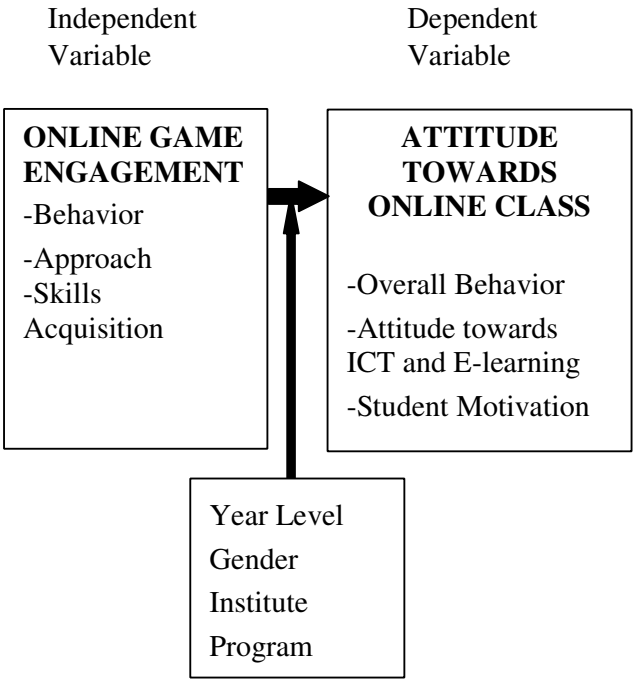

Figure 1. Conceptual Framework of the study

1.4 Research Questions

The main research questions that guided the study is:

RQ1. What is the demographic profile of the participants of the study in terms ofGender, Year level, Institute, and Enrolled Program?

RQ2. What is the level of Online Game Engagement in terms ofBehavior, Approach, and Skills Acquisition?

RQ3. What is the level of Attitude towards Online Class in terms of Overall Behavior, Attitude towards ICT and E-learning, and Student Motivation?

RQ4. Is there a significant difference in the level of Online Game Engagement in terms ofGender, Year Level, Institute, Enrolled Program?

RQ5. Is there a significant difference in the level of Attitude towards Online Class in terms ofGender, Year Level, Institute, Enrolled Program?

RQ6. Is there a significant relationship between Online Game Engagement and Attitude towards Online classes among the students?

1.1 Null Hypothesis

Ho1: There is no significant difference in the level of Online Game Engagement when grouped according to: Gender, Year level, Institute, and Enrolled Program.

Ho2: There is no significant difference in the level of

Attitude towards Online Class when grouped according to: Gender, Year level, Institute, and Enrolled Program.

Ho3: There is no significant relationship between online Game Engagement and Attitude towards Online classes among students.

2. METHODOLOGY

The methodology describes and explains the different procedures, including research design, research locale, participants of the study, data gathering procedure, sampling technique, statistical treatments, and ethical considerations.

2.1 Research Design

The researchers developed a quantitative questionnaire to use as the survey instrument. In this study, the researchers use correlational research as the design because it investigates the correlation between online games and online classes. Answering the research question hypothesis is the central purpose of the study.

2.2 Research Locale

This study was conducted at Davao del Norte State College, Panabo City, Davao del Norte, Philippines. The respondents were surveyed through research questionnaires. The researchers chose the place of implementation because it will give the researchers the needed amount of information for students with online games engagement. The study was conducted in the first semester of the academic year 2019-2020.

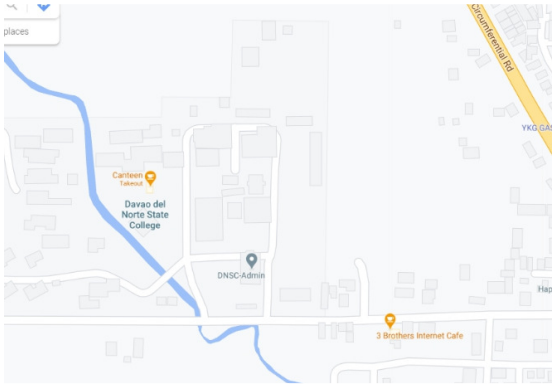

Figure 2. Research Locale

2.3 Participants of the Study

The study was conducted between November 2020 and January 2021 using 100 students in all year level who play online games from Davao del Norte State College (DNSC), a public college in Panabo City. This study refers to all members of a particular group. It is the group of students who were interested in the study. The participants

selected in 25 enrolled in different programs per Institute.

2.4 Sampling Techniques

The researchers used the quota sampling technique to select 100 respondents, having 25 students per quota in each Institute. The quota sampling technique belongs to non-probability sampling. It is a sampling technique that involves selecting typical cases from diverse strata of a population [11]. Since Davao del Norte State College has four institutes, the researchers used this sampling technique to generate 25 respondents as a quota in each Institute that generalized the population. Quota sampling is a method of gathering sample data from a group or strata of the population. It ensures that the sample group represents certain characteristics of the population chosen by the researcher [11]. This sampling technique saves time, and the researchers effectively represent a population using this sampling technique [12].

2.5 Statistical Treatments

The data gathered from the questionnaire were collected and presented in tables and subjectedto certain statistical treatments. Percentage and frequency distribution used to organize and describe the personal profile of the students-respondent. Each item's percentage is computed by dividing it by the total sample number of respondents who answered the survey. The formula that uses in the application of this technique is:

P = (f/n) x 100 where: P = percentage
f = frequency
n = number of cases or total sample

2.6 Data Collection Procedure

The first step before going to the testing proper is to make a request letter. Upon approval, the researcher retrieves the request letter. The College Dean and the class advisers, and other faculty members were selected in the administration.

In administering the questionnaire, the researcher used the time allotted for vacant to avoid the distraction of class discussions. The student responses were given enough time to answer the questions. After data gathering, the researchers now collected itfortallyingthe scores and applying the statistical treatment to be used with the study.

2.7 Research Instrument

The research instrument used for the study was a researcher-made questionnaire checklist to gather needed data for the student's profile. The questionnaire's draft was drawn out based on the researcher's readings, previous studies, literature published, and unpublished thesis relevant to the study. In the preparation of the instrument, the requirements in the designing of a good data collection instrument were considered. For instance, a statement describing the situations pertaining was toned down to accommodate the respondents' knowledge preparedness.

Open-ended optionswere provided to accommodate free formatted views related to the topics. In this way, the instrument is authorized to obtain valid responses from the students. Preference for using a structured questionnaire is premisedon several assumptions such as cost of being the least expensive means of data gathering, avoidance of personal bias, less pressure for an immediate response, and giving the respondents a more incredible feeling of anonymity. Consultants and professors validated the instrument before it was laid on to the study.

2.8 Ethical Considerations

The main concern of the study is college students. The researchers ensure the students' safety and confidentiality, and they follow the ethicalstandardsin conductingtheir study. These are the following standards: consent, respect for

the students, justice, and confidentiality. Consent and verbal forms were involved in the conduct of the study. Each participant of the study was asked for their permission, approval, and time to answer the research questionnaire which the link for the form was sent via messenger and Facebook. This is done to show some respect to the participants.

Consents are also one way of showing respect to the participants. Through consent, the participants were able to know the objectives and purpose of the study. The consents were giventothemthroughthelinksendvia messenger and Facebook, and after they answer theconsent, theyproceedtoanswer the questionnaire. For the participants' protection, anonymity and confidentiality of any of the responses from them were observed. The researchers also responsibly hide the participants' identities, kept the notes, transcripts, and other materials used from the conducted survey. It is important to give credits or acknowledge the participant's contributions as they are part of the research's success. This is to give justice to their participation in the said study.

3. RESULTS AND DISCUSSIONS

Profile of the Respondents

As shown in Table I, there are a number of 100 participants in this study. There were 58.0 % female respondents and 42.0% male respondents. In the year levels, 6.0% of the samples were first year students, 21.0 % were second year students, 72.0% were third year students and 1.0% were fourth year students. The number of students per Institute are the same since it is a quota sampling. 19.0% of the respondents belongs to the program of BSIT, 13.0% of the respondents were from BSED English, and 11.0% of the respondents are BSMB students, 10.0% of the respondents are from BSFT, 4.0% of the respondents are from BS Entrep, 10.0% of the respondents are from BSTM, 6.0% of the respondents are from BPA, 4.0% of the respondents are from BSFAS, 5.0% of the respondents are from BSSW, BTLEd students participated in the survey is 5.0%, Both BSED Sci and BA Comm students have 3% of the respondents participated in the survey and last the 1% are the respondents from BSED Math.

TABLE I.
FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE RESPONDENTS PROFILE

Characteristic	Frequency (N=100)	Percentage
Gender		
Male	42	42.0
Female	58	58.0
Year Level		
1st Year	6	6.0
2nd Year	21	21.0
3rd Year	72	72.0
4th year	1	1.0
Institute		
IIT	25	25.0
IAAS	25	25.0
IMAGOCS	25	25.0
IED	25	25.0
Program		
BSIS	6	6.0
BSIT	19	19.0
BSMB	11	11.0
BSFT	10	10.0
BS Entrep	4	4.0
BSTM	10	10.0
BPA	6	6.0
BSFAS	4	4.0
BSSW	5	5.0
BSED Eng	13	13.0
BTLEd	5	5.0
BSED Sci	3	3.0
BA Comm	3	3.0
BSED Math	1	1.0

Level of Online Game Engagement

Table 2 shows the level of online game engagement which divided into three indicators. The first indicator is behavior. The mean of the level of behavior in the student's online game engagement of the respondents is 2.7337 with a standard deviation of 0.22049. This shows that the behavior in the student's online game engagement of the respondents is moderate. This behavior the potential and expressed capacity for physical, mental, and social activity during the phases of

human life.[13] Behavior contributes to the effectiveness of online game engagement. Engagement may be considered as the "behavioral intensity and emotional quality of a person's active involvement during a task" [14].

TABLE II.
MEAN AND STANDARD DEVIATION DISTRIBUTION OF RESPONDENTS' LEVEL OF ONLINE GAME ENGAGEMENT

Indicators	N	Mean	Standard Deviation
OGE_Behavior	100	2.7337	.22049
OGE_Approach	100	2.7916	.20287
OGE_Skills Acquisition	100	2.5755	.34943

The second indicator tells about the Approach, the mean of the level of approach in the online game engagement of the respondents is 2.7916 with a standard deviation of 0.20287. This depicts that the approach in the online game engagement of the respondents is moderate. Approach refers to the basic philosophy or belief concerning the subject matter being considered which contributes to the effectiveness of online game engagement because this definition is interesting as it reflects the different manifestations of engagement (emotional, cognitive, and behavioral)[14].

Moreover, the third indicator is the Skills Acquisition in online game engagement, the mean of level of skills acquisition in the online game engagement of the respondents is 2.5755 with a standard deviation of 0.34943. This shows that the skills acquired in the online game engagement of the respondents are low. In simplified terms, skill acquisition refers to voluntary control over movements of joints and body segments in an effort to solve a motor skill problem and achieve a task goal [15]. The premise that knowledge is formed and supported by the cultural, social, and physical experiences and situations of an individual. Learning occurs in the everyday life experiences of an individual and the theoretical model emphasizes an authentic context for skill acquisition [10].

Level of Attitude towards Online Class

Table 3 shows the result of the level of attitude towards online class are classify into three indicators. The mean of the level of overall behavior for attitude towards online class is 2.2481 with a standard deviation of 0.43753. This shows that the level of overall behavior for attitude towards online class is low. Overall behavior is one of the factor in attitude of students towards online class. The research found out that respondents consider overall behavior as a contributor to the attitude towards online class.

TABLE III.
Mean and Standard Deviation Distribution of Respondents' Level of Attitude towards Online Class

Indicators	N	Mean	Standard Deviation
ATOC_Overall Behavior	100	2.2481	.43753
ATOC_Attitude	100	2.2104	.40947
ATOC_StudentMotivation	100	2.4730	.41747

The next indicator is the attitude towards ICT and E-learning. The mean of the attitude towards ICT and E-learning for attitude towards online class is 2.2104 with a standard deviation of 0.40947. This shows that the level of attitude towards ICT and E-learning for attitude towards online class is low. The attitude of students towards E-learning is affecting the attitude of students towards the online class. It is obvious that students have a clearly stated positive attitude towards online distance learning, which implies that they are more likely to accept it well as a mode of education. The majority of them not only use ICT in their everyday life but would also like to use ICT actively in their education. It could be concluded that students' main aspirations are related to the employment of an effective online learning environment with integrated technologies for providing online communication between

participants, online assignment submission, and online support by the teacher [16].

Meanwhile for the last indicator, Student Motivation. The mean of level of student motivation for attitude towards online class is 2.4730 with a standard deviation of 0.41747. This shows that the level of student motivation for attitude towards online class is low. Students' motivation has low level contribution in attitude towards online class.

Significant difference in the level of Online Game Engagement in Interposing Variables

Online Game Engagement.

Table 4 shows the significant difference in the online game engagement when grouped according to gender, year level, Institute and program. The tool that was used to analyze the significant difference is ANOVA (Analysis of Variance).

Null hypothesis: There is no significant difference in the online game engagement when grouped according to gender, year level, Institute and program.

TABLE IV.
ANOVA DISTRIBUTION OF RESPONDENTS' SIGNIFICANT DIFFERENCE IN THE LEVEL OF ONLINE GAME ENGAGEMENT TO GENDER, YEAR LEVEL AND PROGRAM
ANOVA (BETWEEN GROUPS)

	Sum of Squares	DF	Mean of Squares	F	Sig.
OGE Mean Gender	.04725	98	0.16	3.345	.503
OGE Mean Year Level	.070	3	.023	4.850	.003
OGE Mean Institute	.049	3	.016	3.288	.024
OGE Mean Program	.122	13	.009	1.965	.034

Since *p*-value is 0.503>0.05 when grouped according to gender, then we do not reject the null hypothesis. There is no significant difference in the online game engagement when grouped according to gender. It indicates that gender do not influence to the level of online game engagement among student.

Since *p*-value is 0.003<0.05, then we reject the null hypothesis. Table 4 shows significant difference in the online game engagement when grouped according to year level.

Since *p*-value is 0.024<0.05, then we reject the null hypothesis and accept the alternative. There is a significant difference in the online game engagement when grouped according to Institute. It indicates that the Institute that the student belong affect and influence the level of online game engagement among student.

Since *p*-value is 0.034<0.05, then we reject the null hypothesis and accept the alternative. Therefore, there is a significant difference in the online game engagement when grouped according to program. It indicates that the program taken influence to the level of online game engagement among student.

Substantial difference in the Level of Attitude towards Online Class in Interposing Variables

Attitude toward Online Class

Table 5 shows the substantial difference in online class attitude when grouped according to gender, year level, Institute, and program. ANOVA was used in analyzing the substantial difference.

Null Hypothesis: There is no significant difference in the attitude towards online class when grouped according to gender, year level, Institute and program.

TABLE V.
ANOVA DISTRIBUTION OF RESPONDENTS' SIGNIFICANT DIFFERENCE IN THE LEVEL OF ATTITUDE TOWARDS ONLINE CLASS TO GENDER, YEAR LEVEL, AND PROGRAMANOVA (BETWEEN GROUPS)

	Sum of Squares	DF	Mean Squares	F	Sig.
Gender	.076	98	.038	7.287	.008
Year Level	.288	3	0.96	6.852	.000
Institute	.167	3	.056	3.651	.015
Program	.374	13	.029	1.965	.034

Since the *p*-value is 0.008<0.05, then we reject the null hypothesis. Therefore, there is a significant difference in attitude towards online classes when grouped according to gender. This shows that gender influence the student's attitude towards online class.

Since the *p*-value is 0.000<0.05, then we reject the null hypothesis. Table 5 shows a significant difference in the attitude towards online classes when grouped according to year level.

Since the *p*-value is 0.015<0.05, then we reject the null hypothesis. There is a significant difference in attitude towards online classes when grouped according to program. It suggests that the Institute influences the attitude of the students towards the online class.

Since the *p*-value is 0.034<0.05, then we reject the null hypothesis. There is a significant difference in attitude towards online classes when grouped according to program. It suggests that the program influence the attitude towards online class among student.

Relationship between the Online Game Engagement and Attitude towards Online Class of students

TABLE VI.
CORRELATIONS BETWEEN MEASURES CORRELATIONS

		OGE Mean	ATOC Mean
OGE Mean	Pearson Correlation	1	.644**
	Sig. (2-tailed)		.000
	N	100	100
ATOC	Pearson	.644**	1
Mean	Correlation		
	Sig. (2-tailed)	.000	
	N	100	100

Two-tailed correlations between variables were being explored in Table 6. The result shows a weak negative correlation with an r-value of 0.644, which means a strong positive relationship between online game engagement and attitude towards online class. Since the *p*-value is 0.000<0.05, then we reject the null hypothesis. Therefore, there is a significant relationship between online game engagement and attitude towards online classes.

As stated in Situated Cognition theory, is based on the premise that knowledge is formed and supported by the cultural, social, and physical experiences and situations of an individual. Learning occurs in an individual's everyday life experiences, and the theoretical model emphasizes an authentic context for skill acquisition [16].

The results also relates to the study of Buladaco et al, wherein technology in general has been a large part of the students motivation in their learnings and education especially in higher education [17].

4. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The conclusions of the findings for the relationship of the online game engagement and attitude towards online class are based on the result of the study. The conclusions are as stated below:

For research question 1, it describes the demographic profile of the respondents of the study. The majority of the respondents' gender is female, and the majority year level is 3rd year-college. Most of the respondents were from the program of Bachelor of Science in Information Technology. In research question number 2, it is about the level of online game engagement in terms of the three indicators: behavior, approach, and skills

acquisition. The overall result indicates a moderate level of online game engagement, proving that it is quite effective. Meanwhile, in research question number 3, it is about the attitude towards the online class in terms of the three indicators: the overall behavior, attitude towards ICT and E-learning, and student motivation. The study found out a low level of attitude towards online class among the student proving that online class does not contribute to the students' attitude.

In research question number 4 and 5 is about finding the significant difference of the two variables testing on the moderating variables. The study concluded that the moderating variable gender does not affect the level of Online Game Engagement while it affects and influences the level of Attitude towards Online Class. For the year level, Institute, and program, these moderating variables affect and influence the level of Online Game Engagement of the students as well as the level of Attitude towards Online classes among students. It means that the two variables have a significant difference when group according to the year level, Institute, and program.

Furthermore, for the last research question about determining the relationship of online game engagement and attitude towards online class among students, the study concluded that there are a strong positive correlation and significant relationship between online game engagement and attitude towards online class among college students of Davao del Norte State College. Therefore, the online game engagement of students is related to their attitude towards online classes. If the student has a high level of online game engagement, then the level of the attitude towards online class will also be high, while if the student attitude towards online class is low it's level of online game engagement will also below.

Recommendations

This study has generated findings that indicate the responses of the participants of the study. The findings provide practical implications for online game engagement towards the online classes. The implications are as follows:

First, providing the students limit in online games and set limit using phones during the weekday. Also spent more time for educational purposes, not playing different online games. Furthermore, parents needed to protect their children from being addicted to online games proactively

Second, parents must have more time bonding without using digital devices and strengthening their communication together. Parents should always remind their children to use digital devices for educational purposes

Third, parents must remind their children to practice self-efficiency. Students must also practice being optimistic to avoid tardiness.

Last, for the future researcher, a further study may be conducted with more scope and dig dipper of the possibilities that can be used online games to improve student comprehension and improve communication between parents and their children. Sentiments analysis can also be applied with the qualitative data to gather tweets from students posting in social media which can better understand the emotions of these students when playing games. This is evident as machine learnings are used to analyze tweets in transport infrastructure [18].

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You need to be aware of what others are doing, applaud their efforts, acknowledge their successes, and encourage them in their pursuits. When we all help one another, everybody wins." – Jim Stovall

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