RESEARCH ARTICLE   OPEN ACCESS

Relationship of Sociality in Multiplayer Online Games and Academic Interest among Senior High School Students of St. Mary's College of Bansalan, Inc

Celeste Jan O. Aldense[1], Eddie Ramos Jr.[2], Marcelo M. Landero[3], Lycel Geyrozaga[4], Jhon Bryan J. Cantil[5]

[1](BS in Information Technology, St. Mary's College of Bansalan, Inc., Email: aldenese2018@gmail.com)
[2](BS in Information Technology, St. Mary's College of Bansalan, Inc., Email: japzramos.210@gmail.com)
[3](BS in Information Technology, St. Mary's College of Bansalan, Inc., Email: landermarcelo2020@gmail.com)
[4](Instructor, BS in Hospitality Management, St. Mary's College of Bansalan Inc., Email: lycelgeyrozaga8@gmail.com)
[5](Program Head, BS in Information Technology, St. Mary's College of Bansalan Inc., Email: jhonbcantil@gmail.com)

--------------------------------------************************--------------------------------

Abstract:

Various literatures have discussed that the sociality in any environment dictates the academic functioning of a student, especially his interest to schooling. The principal objective of this descriptive-correlational research study was to measure the significant correlation between sociality in multiplayer online games and academic interest of senior high school students in St. Mary's College of Bansalan, Inc. (SMCBI). This study utilized two adapted questionnaires during the data collection. Through the Google Forms software, the survey was virtually administered to 54 senior high school students of SMCBI. The collected data were analysed and interpreted by a statistician using four statistical tools, namely, relative frequency, weighted mean, analysis of variance, and Pearson's r. The interpreted data were presented and explained further by the researchers in a concise manner. The survey results showed that the level of sociality in multiplayer online games is moderate and that the level academic interest is moderate. There is no significant difference on the level of both sociality in multiplayeronline games and academic motivation according to gender, age group, year level, and SHS program. Sociality in multiplayer online games and academic interest were weakly correlated in a positive manner.

Keywords **—descriptive-correlational research study, sociality in multiplayer online games, academic interest, St. Mary's College of Bansalan, Inc.**

--------------------------------------************************--------------------------------

I. INTRODUCTION

The student's level of interest towards learning has been greatly affected by various factors especially by the technological advancements. During the flourishing timeline of technology, multiplayer online games were being put in the middle of the spotlight as a virtual avenue for leisure and socialization because of its expanded virtual environment and its ability to host social interaction between players [1]. Connectedly, this virtual sociality has seen to impact the psychological aspects of gamers as documented by various researches. In fact, the socialization and behaviors committed by gamers against others in the virtual platform prompts positive or negative psychological impacts much like real-world behavior does [2]. Connectedly, in the academic arena, one major driver of the student's academic interest to learning is the psychological impacts of socialization. Therefore, if the student has a good experience in multiplayer online games, it may

positively influence his academic interest, motivation, and achievement [3].

According to a literature, the sociality in gaming has two major categories; these are, anti-social behavior, which is interpersonally destructive; and pro-social behavior, which is interpersonally constructive [15]. These categories are valid to be used in relation to bully behaviors, wherein bullying is perceived as an anti-social behavior, and bully intervention is perceived as a pro-social behavior [16]. On the other hand, Academic Interest is driven by emotional and cognitive interests. Emotional Interest refers to the collection of driving factors that make students eager to immerse him to a content or lesson because he is excited; while Cognitive Interest are the driving factors that make students eager to immerse him to a subject or course because he possesses a clear structural understanding of the content [17].

Internationally, a study aimed to examine the academic interest, engagement, and achievement in relation to the sociality in multiplayer online games, and the potentiality of such games to be used as an educational tool. It considered the important effects of online games to the students including socialization skills, and collaborative skills. Then, it measured how such skills relate to the academic functioning of students. Further, the same study found out that as the multiplayer online games were introduced to the students, the students seemed to have increased levels of interest, motivation, engagement and performance in learning [4]. Similarly, another study said that academic stakeholders have integrated the advantage of multiplayer online games in the academe to support the interest of students to learning. It has been said that such games provide high socialization and wide interactive environment. Further, it has been confirmed that academic interest is higher when integrated with multiplayer online games because of its advantage to socialization and simulation. However, it is important to note that the level of academic interest of the students can increase or decrease depending on their experience with the sociality in the multiplayer online games [5].

In the Philippines, video games like multiplayer online games were seen to affect the academic attitudes of students. It has shown that the students tend to lose interest in reading books, listening to teachers' instructions, and socializing to their classmates when they are more inclined to playing computer-mediated games. This is because the psychological effects they get from socializing with other gamers in the virtual platform affect their attitudes in the actual environment. If they experienced negative social environment during their game, they tend to absorb that experience and acts it out in the actual physical environment as well such as in school [18].

Locally, many students in St. Mary's College of Bansalan, Incorporated are fond of playing multiplayer online games especially during the pandemic as it became their coping mechanism to the stresses they acquire from various aspects. As researchers, we want to find out their perceptions and attitudes about the sociality in multiplayer online games and how does this sociality affect their academic interest as students. Further, there is still no research study ever conducted locally regarding the said subject, thus, the study's urgency to be undertaken.

Theoretical Framework

The independent variable, Sociality in Multiplayer Online Games, is anchored to the Deindividuation Theory developed by Festinger, Pepitone, and Newcomb [6]. On the other hand, the dependent variable, Academic Interest, is anchored to the Theory of the Ecology of Human Development proposed by Bronfenbrenner [7]. These theories show the possible interconnection of the variables in this present study.

According to Hughes, online games manifest social interaction in a virtual group [8]. Connectedly, the Deindividuation Theory says that the individuals in a group may decrease their sense of identity resulting to reduced self-awareness and self-regulation [9]. This theory supports the idea of the Sociality in Multiplayer Online Games in such way that gamers are more likely to have negative

actions and attitude towards their teammates and/or enemies. This is seconded by the results of Joinson's study that gamers are more willing to have socially unacceptable behaviors, especially in the aspect of communication, when their identity remains confidential [10]. In contrary, Bandura coined the term "Power of Humanization" to explain that a person can have more humanized actions if he has positive perceptions to the group he is immersed [11]. For instance, a certain study found that if the gamer likes the performance of avatar used by his teammate or opponent in a game; he has a more acceptable social interaction towards the player who uses that avatar. Therefore, based on the theory, the Sociality in Multiplayer Online Games can be positive or negative [12].

Further, the variable Academic Interest of this study is anchored to the Theory of the Ecology of Human Development proposed by Bronfenbrenner. According to his theory, the person-environment properties, the structure of environmental setting, and the processes that are observable between them must be viewed as interdependent. Simply stating, if a person moves from one environment to another, he absorbs the psychological impacts of the first environment where he came from and carries it to the second environment where he transfers to, creating a relationship between these two environments [13]. In the context of this present study, the student absorbs and carries the impacts of the sociality in multiplayer online games, and transfers it to the academic context affecting the interest of the student to participate in class.
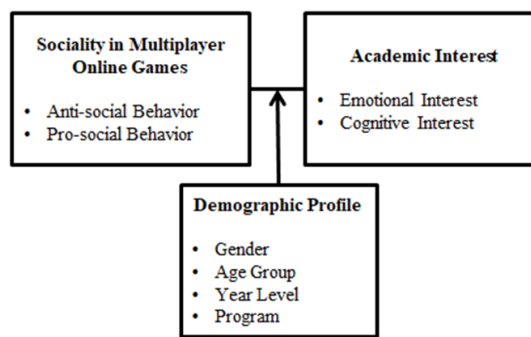
Conceptual Framework

Figure 1. Conceptual Framework of the study

The conceptual framework above presents the important variables of the study and their respective indicators. It shows the possible interconnection of the independent and dependent variables with respect to the moderating variable.

The researchers of this present study have Sociality in Multiplayer Online Games as their independent variable. It has two indicators, namely, Anti-Social Behavior and Pro-social Behavioras indicated by Hughes [14]. Meanwhile, Academic Interest is the dependent variable which has two indicators, namely, Emotional Interest and Cognitive Interest as indicated by Mazer [17]. Continually, the moderating variable is the Demographic Profile that has four indicators, namely, Gender, Age Group, Year Level, and Program. The purpose of this moderating variable is to help the interpretation of the correlation between the Sociality in Multiplayer Online Games and the Academic Interest.

Research Questions

This study intends to find out the degree of the relationship of the sociality in multi-player online games and the academic interest among senior high school (SHS) students in St. Mary's College of Bansalan, Inc. Specifically, this study seeks, to answer the following questions:

1. What is the profile of the respondents in terms of:
   a. Gender
   b. Age Group
   c. Year Level

d. Program?
2. What is the level of sociality in multi-player online games among SHS students in St. Mary's College of Bansalan, Inc. in terms of:
   a. Anti-Social Behavior
   b. Pro-Social Behavior?
3. What is the level of academic interest among SHS students in St. Mary's College of Bansalan, Inc. in terms of:
   a. Emotional Interest
   b. Cognitive Interest?
4. Is there a significant difference in the level of sociality in multi-player online games among SHS students when grouped according to:
   a. Gender
   b. Age Group
   c. Year Level
   d. Program
5. Is there a significant difference in the level of academic interest among SHS students when grouped according to:
   a. Gender
   b. Age Group
   c. Year Level
   d. Program

Is there a significant relationship between the sociality in multi-player online games and the academic interest among senior high school (SHS) students in St. Mary's College of Bansalan, Inc?

Null Hypothesis
1. There is no significant difference in the level of sociality in multi-player online games among SHS students when grouped according to gender, age group, year level, and program.
2. There is no significant difference in the level of academic interest among SHS students when grouped according to gender, age group, year level, and program.
3. There is no significant relationship between the sociality in multi-player online games

and the academic interest among senior high school (SHS) students in St. Mary's College of Bansalan, Inc?

II. METHODOLOGY

Research Design

This study will use the descriptive correlational research design utilizing the adapted questionnaires on Sociality in Multiplayer Online Games developed by Hughes [14] and Academic Interest developed by Mazer [17]. According to Simon [19], correlational technique is a non-experimental design, where researchers display the relationships among variables. It is used to describe the variables when the research was conducted after the phenomenon of interest has occurred naturally. The main purpose of a correlational study is to determine relationships between variables, and to determine a regression equation that could be used to make predictions to the population. Through statistical analysis, the relationship will be given a degree and a direction. The degree of relationship determines how closely the variables are related.

Research Locale

Figure 2. Research Locale

The study will be conducted in Saint Mary's College of Bansalan, Incorporated located in Dahlia St. Poblacion Uno, Bansalan, Davao del Sur. The school offers basic education and tertiary education. Further, the school's basic education department is comprised of elementary, junior and senior high school. The tertiary education, on the other hand, has five programs, namely, Bachelor in Elementary Education, Bachelor in Secondary Education, Bachelor of Science in Business Administration,

Bachelor of Science in Hospitality Management, and Bachelor of Science in Information Technology.

Participants of the Study

The participants of this study will be the senior high school students in Saint Mary's College of Bansalan, Incorporated. Upon choosing the samples, the researchers will make use of the following inclusion criteria:

1. The respondent must be a senior high school student.
2. The respondent must be a multiplayer online gamer.
3. The respondent must be willing to participate in this present study with respect to the ethical considerations.

Sampling Techniques

This present study will utilize convenience sampling technique in determining the samples. Convenience sampling is a type of non-probability sampling that involves the sample being drawn from that part of the population that is close to hand. In the case of this study, the total samples will only depend on how many individuals responded to the given online form. Further, there are 56 who have responded.

Statistical Treatments

The following are the statistical tools to be used upon the conduct of this research study:

1. *Relative Frequency.* This tool will be used to describe the Gender, Age Group, Year Level and Program of the respondents as provided in sub problem 1.
2. *Weighted Mean.* This tool will be used to describe the levels of Sociality in Multiplayer Online Games and Academic Interest of senior high school students as provided in sub problems 2 and 3.
3. *Analysis of Variance.* This tool will be used to describe the significant differences of the levels of the Sociality in Multiplayer Online Games and the Academic Interest when analyzed by Gender, Age Group, Year

Level, and Program as provided in the sub questions 4 and 5.

4. *Pearson r.* This tool will be used to describe the significant relationship between the Sociality in Multiplayer Online Games and Academic Interest of the senior high school students as provided in sub problem 6.

Data Collection Procedures

The researchers of this present study will undergo the following steps in conducting the study about the Sociality in Multiplayer Online Games and Academic Interest of senior high school students:

1. A letter of consent will be sent to the respondents asking the permission to conduct the study.
2. When the permission will be granted, the researcher will start administering the questionnaire to the respondents using the Google Forms system.
3. The data to be gathered will be tallied, computed, and analysed using the appropriate statistical tools.

Research Instrument

The instruments used in this study were the adopted questionnaires on Sociality on Multiplayer Online Games from the study of Hughes [14], and Academic Interest from the study of Mazer [17]. The items were modified to fit in to the study. The indicators were carefully scritunized and improved after consultations with adviser.

The first draft of the research instruments was submitted to the research adviser for comments and suggestions to improve its resentation with the corrections included and integrated. Final revisions were made by incorporating the corrections, comments and suggestions given by the adviser before it will be made ready for distribution and administration.

The scale below will be used to measure the Sociality on Multiplayer Online Games:

Range of	Descriptive	Interpretation

Means	Equivalent	
4.20 – 5.00	Very High	The items related to Sociality on Multiplayer Online Games are always manifested.
3.40 – 4.19	High	The items related to Sociality on Multiplayer Online Games are oftentimes manifested.
2.60 – 3.39	Moderate	The items related to Sociality on Multiplayer Online Games are sometimes manifested.
1.80 – 2.59	Low	The items related to Sociality on Multiplayer Online Games are seldom manifested.
1.00 – 1.79	Very Low	The items related to Sociality on Multiplayer Online Games are not manifested at all.

On the other hand, the scale below will be used to measure the Academic Interest:

Range of Means	Descriptive Equivalent	Interpretation
4.20 – 5.00	Very High	The items related to Academic Interest are always manifested.
3.40 – 4.19	High	The items related to Academic Interest are oftentimes manifested.
2.60 – 3.39	Moderate	The items related to Academic Interest are sometimes manifested.
1.80 – 2.59	Low	The items related to Academic Interest are seldom manifested.
1.00 – 1.79	Very Low	The items related to Academic Interest are not manifested at all.

Ethical Considerations

The core concerns of this study are senior students who have experienced the sociality in multiplayer online games that can affect their academic interest in education. In surveying, the researchers will not force anyone to answer or assess the questionnaire.

In distributing the questionnaire, the researchers will do an online survey because they want to upholdthe COVID-19 health protocols, specifically, the avoidance to crowded places. All the responses will stay confidential, and all the statements to be cited will be coded to guarantee the protection of the participant's profile.

III. RESULTS AND DISCUSSION

Presented in this section are the discussions of the results obtained from the statistical treatments of the gathered data. Presented in the Table 1 is the interpretation for the levels of Sociality in Multiplayer Online Games and Academic Interest in answer for the research questions 2 and 3.

TABLEI
INTERPRETATION FOR THE LEVELS OF IV AND DV

Range	Description	Interpretation
4.21-5.00	Very High	This means that items are always manifested.
3.50-4.20	High	This means that items are oftentimes manifested.
2.61-3.40	Moderate	This means that items are sometimes manifested.
1.81-2.60	Low	This means that items are seldom manifested.
1.00-1.80	Very Low	This means that items are never manifested.

The Table 2 on the other hand presents the interpretation for the extent of correlation between Sociality in Multiplayer Online Games and Academic Interest.

TABLE II
INTERPRETATION FOR THE EXTENT OF
CORRELATION BETWEEN IV AND DV.

Range	Description

±1.00	Perfect Positive/Negative Correlation
±0.80 - ±0.99	Very Strong Positive/Negative Correlation
±0.60 - ±0.79	Strong Positive/Negative Correlation
±0.40 - ±0.59	Moderate Positive/Negative Correlation
±0.20 - ±0.39	Weak Positive/Negative Correlation
0 - ±0.19	Negligible Positive/Negative Correlation

The first research question asks for the demographic profile of the student respondents from the St. Mary's College of Bansalan, Inc. To answer, Table 3 presents the asked data.

TABLE III
DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Characteristics (n=56)	Level	F	%
Gender	Male	28	51.90%
	Female	24	44.40%
	LGBT	2	3.70%
Age Group	17 and below	21	38.90%
	18-20	24	44.40%
	21 and above	9	16.70%
Year Level	Grade 11	18	33.30%
	Grade 12	36	66.70%
Program	STEM	23	42.60%
	HUMSS	7	13.00%
	ABM	4	7.40%
	ICT	13	24.10%
	TVL	3	5.60%
	GAS	4	7.40%

The table shows that there are 56 students who have responded to the survey. In terms gender, 28 of the respondents are males, 24 are females, and 2 are members of the LGBT community. In terms of the age group, 21 are aged 17 and below, 24 are aged 18-20, and 9 are aged 21 and above. In terms of year level, 18 are grade 11 students and 36 are grade 12 students. In terms of the SHS program, 23 are from STEM, 7 are from HUMSS, 4 are from ABM, 13 are from ICT, 3 are from TVL, and 4 are from GAS.

Continually, the second research question asks for the level of sociality in multi-player online games among SHS students in St. Mary's College of Bansalan, Inc. in terms of Anti-Social Behavior and Pro-Social Behavior. Table 4 provides the answer for the question.

TABLE IV
SOCIALITY IN MULTIPLAYER ONLINE GAMES, n=56

Indicators	Mean	Standard Deviation
Anti-Social Behavior	2.2074	0.93483
Pro-Social Behavior	3.9444	1.02075
Sociality in Multi-Player Online Games	3.0759	0.65511

As observed, the indicator with the highest mean score of 3.94 with a standard deviation of 0.93 is the Pro-Social Behavior. This means that the level of Sociality in Multiplayer Online Games in terms of pro-social behavior is *High* which implies that items are oftentimes manifested.This result supports the literature of Wang & Wang [20] which says that multiplayer online games manifest pro-social behavior among the players. More, the acts of altruism and reciprocity among players are the main drivers of prosocial behaviour in the virtual playroom.

Meanwhile, the lowest indicator with the mean core of 2.21 and a standard deviation of 0.93 is the Anti-Social Behavior. This means that the level of Sociality in Multiplayer Online Games in

terms of pro-social behavior is *Low* which implies that items are seldom manifested. This affirms the claims of Tang and Fox [21] who said that the computer-moderated multiplayer games sometimes manifest anti-social behaviors among the players. Further, these anti-social behaviors are established by hostile sexism and general harassment made by the players towards their opponents.

Overall, the variable Sociality in Multiplayer Online Games has a mean score of 3.08 with a standard deviation of 0.66. This means that the holistic level of Sociality in Multiplayer Online Games is *Moderate* which implies that items are sometimes manifested. Connectedly, a literature says that the sociality in multiplayer online games has seen to impact the psychological aspects of gamers as indicated by the prevalence of positive and negative psychological impacts among the gamers [2].

Moving on, the third research question asks for the level of academic interest among SHS students in St. Mary's College of Bansalan, Inc. in terms of Emotional Interest and Cognitive Interest. The Table 5presents the data needed to the answer the question.

TABLE V
ACADEMIC INTEREST, n=54

Indicators	Mean	Standard Deviation
Emotional Interest	3.7181	0.76150
Cognitive Interest	3.6772	0.67418
Academic Interest	3.6977	0.66028

As reflected in the table, the mean score of the level of academic interest among SHS students in in St. Mary's College of Bansalan, Inc. in terms of emotional interest is 3.71 with a standard deviation of 0.76. This means that the level of academic interest among SHS students in in St. Mary's College of Bansalan, Inc. in terms of emotional interest is *High* which implies that items are oftentimes manifested.In connection, Mazer [23] which says that emotional interest makes the student engaged into a content area because they are excited and emotionally motivated by the material.This event will make the students acquire more learnings.

On the other hand, the mean score of the level of academic interest among SHS students in in St. Mary's College of Bansalan, Inc. in terms of cognitive interest is 3.68 with a standard deviation of 0.67. This means that the level of academic interest among SHS students in in St. Mary's College of Bansalan, Inc. in terms of cognitive interest is *High* which implies that items are oftentimes manifested. This result affirms the idea of Mazer [21] which states that students experience an increase in academic interest in terms of cognitive interest especially when theythey possess a clear structural understanding of the content.

Overall, the variable Academic Interest has a mean score of 3.69 with a standard deviation of 0.66. This means that the holistic level of Academic Interest is *High* which implies that items are oftentimes manifested. In support Dublas, et. al. [22] says that, in e-learning context, students are academically interested especially when there is a stable internet connection Connectedly, another literature says that a high level of academic interest is caused by the joint drives of emotional and cognitive interest. Further, academic interest will result to a higher achievement for the students [17].

Going further, the fourth question asks for the significant difference in the level of sociality in multi-player online games among SHS students when grouped according to Gender, Age Group, Year Level, and Program. The Table 6presents the data needed to the answer the question in terms of gender.

TABLE VI
SIGNIFICANT DIFFERENCE ON THE LEVEL OF SOCIALITY IN MULTI-PLAYER ONLINE GAMES ACCORDING TO GENDER

Gender	Mean	SD	F	Sig.
Male	3.1149	0.63153	0.434	0.650
Female	3.0646	0.70624		
LGBT	2.6667	0.35355		
Total	3.0759	0.65511		

Since, p-value 0.650 > 0.05 then we do not reject the null hypothesis. There is no significant difference on the level of level of sociality in multi-player online games according to gender. This means that gender variations do not affect the level of sociality in multi-player online games among SHS students.

The Table 7presents the data needed to the answer the question in terms of age group.

TABLE VII
SIGNIFICANT DIFFERENCE ON THE LEVEL OF
SOCIALITY IN MULTI-PLAYER ONLINE GAMES
ACCORDING TO AGE GROUP

Age Group	Mean	SD	F	Sig.
17 and below	2.8786	0.53552	1.693	0.194
18-20	3.2313	0.61407		
21 and above	3.1222	0.93013		
Total	3.0759	0.65511		

Since, *p*-value 0.194 > 0.05 then we do not reject the null hypothesis. There is no significant difference on the level of sociality in multi-player online games according to age group. This means that age variations do not affect the level of sociality in multi-player online games among SHS students.

The Table 8presents the data needed to the answer the question in terms of year level.

TABLE VIII
SIGNIFICANT DIFFERENCE ON THE LEVEL OF
SOCIALITY IN MULTI-PLAYER ONLINE GAMES
ACCORDING TO YEAR LEVEL

Year Level	Mean	SD	F	Sig.
Grade 11	2.8306	0.55085	4.002	0.051
Grade 12	3.1986	0.67532		
Total	3.0759	0.65511		

Since, *p*-value 0.051 > 0.05 then we do not reject the null hypothesis. There is no significant difference on the level of sociality in multi-player online games according to year level. This means that variations of year level do not affect the level

of sociality in multi-player online games among SHS students.

The Table 9 presents the data needed to the answer the question in terms of SHS program.

TABLE IX
SIGNIFICANT DIFFERENCE ON THE LEVEL OF
SOCIALITY IN MULTI-PLAYER ONLINE GAMES
ACCORDING TO PROGRAM

Program	Mean	SD	F	Sig.
STEM	2.8478	0.60577	1.304	0.278
HUMSS	3.3643	0.64753		
ABM	3.2833	0.31091		
ICT	3.2782	0.85419		
TVL	2.8333	0.15899		
GAS	3.2000	0.33665		
Total	3.0759	0.65511		

Since, *p*-value 0.278 > 0.05 then we do not reject the null hypothesis. There is no significant difference on the level of sociality in multi-player online games according to program. This means that variations of programs do not affect the level of sociality in multi-player online games among SHS students.

Forging ahead, the fifth question asks for the significant difference in the level of academic interest among SHS students when grouped according to Gender, Age Group, Year Level, and Program. The Table 10 presents the data needed to the answer the question in terms of gender.

TABLE X
SIGNIFICANT DIFFERENCE ON THE LEVEL OF
ACADEMIC INTEREST ACCORDING TO GENDER

Gender	Mean	SD	F	Sig.
Male	3.6244	0.67750	0.538	0.587
Female	3.7996	0.65060		
LGBT	3.5000	0.70711		
Total	3.6977	0.66028		

Since, *p*-value 0.587 > 0.05 then we do not reject the null hypothesis. There is no significant difference on the level of level of academic interest according to gender. This means that gender variations do not affect the level of academic interest among SHS students.

The Table 11 presents the data needed to the answer the question in terms of age group.

TABLE XI
SIGNIFICANT DIFFERENCE ON THE LEVEL OF
ACADEMIC INTEREST ACCORDING TO AGE GROUP

Age Group	Mean	SD	F	Sig.
17 and below	3.7914	0.63079	2.076	0.136
18-20	3.7659	0.71576		
21 and above	3.2972	0.45080		
Total	3.6977	0.66028		

Since, *p*-value 0.136 > 0.05 then we do not reject the null hypothesis. There is no significant difference on the level of academic interest according to age group. This means that age variations do not affect the level of academic interest among SHS students.

The Table 12 presents the data needed to the answer the question in terms of year level.

TABLE XII
SIGNIFICANT DIFFERENCE ON THE LEVEL OF
ACADEMIC INTEREST ACCORDING TO YEAR LEVEL

Year Level	Mean	SD	F	Sig.
Grade 11	3.7844	0.67672	0.461	0.500
Grade 12	3.6543	0.65723		
Total	3.6977	0.66028		

Since, *p*-value 0.500 > 0.05 then we do not reject the null hypothesis. There is no significant difference on the level of academic interest according to year level. This means that variations in year level do not affect the level of academic interest among SHS students.

The Table 13 presents the data needed to the answer the question in terms of SHS program.

TABLE XIII
SIGNIFICANT DIFFERENCE ON THE LEVEL OF
ACADEMIC INTEREST ACCORDING TO PROGRAM

Program	Mean	SD	F	Sig.
STEM	3.5794	0.69410	0.647	0.665
HUMSS	3.7982	0.66340		
ABM	4.0556	0.70755		
ICT	3.8034	0.70474		
TVL	3.3386	0.60491		
GAS	3.7698	0.26773		
Total	3.6977	0.66028		

Since, *p*-value 0.665 > 0.05 then we do not reject the null hypothesis. There is no significant difference on the level of academic interest according to program. This means that variations in SHS program do not affect the level of academic interest among SHS students.

Finally, the sixth and last research question asks for the significant relationship between the sociality in multi-player online games and the academic interest among college students in St. Mary's College of Bansalan, Inc. The Table 14 provides the data needed to answer the research question.

TABLE XIV
CORRELATION BETWEEN SOCIALITY IN
MULTIPLAYER ONLINE GAMES AND ACADMEIC
INTEREST

Variables	Mean	SD	r-value	p-value
SMOG	3.5374	0.90201	*0.363*	*0.007*
AI	3.1630	0.94354		

Table 14 shows the positive correlation between the sociality in multi-player online games and the academic interest. Since, p-value is 0.007<0.05, then we reject the null hypothesis. There is a significant relationship between the sociality in multi-player online games and the academic interest. With the r-value of 0.660, the sociality in multi-player online games and the academic interest has weak/negligible positive relationship. This supports the literature which says that one major driver of

the student's academic interest to learning is the psychological impacts of socialization. Therefore, if the student has a good experience in multiplayer online games, it may positively influence his academic interest, motivation, and achievement [3].

IV. CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

Based on the findings of this research study, the following conclusions are drawn:

1. The results were able to show the demographic profile of the respondents in terms of gender, age group, year level, and program. Importantly, there are 54 senior high school students who have responded.
2. The results were able to show a moderate level of Sociality in Multiplayer Online Games among the SHS students in ST. Mary's College of Bansalan.
3. The results were able to show a high level of academic interest among the SHS students in ST. Mary's College of Bansalan.
4. The results were able to show no significant difference on the level of Sociality in Multiplayer Online Games according to gender, age group, year level and SHS program.
5. The results were able to show no significant difference on the level of Academic Interest according to gender, age group, year level and SHS program.
6. The results were able to show a weak positive relationship between awareness to e-learnig and academic interest among the SHS students in ST. Mary's College of Bansalan.

Recommendations:

The following recommendations are generated with the integration of the findings of this present study.

1. Parents may strengthen their rulings with regards to the online gaming engagement of their children to decrease the probability of adopting anti-social behaviors from the online games.
2. Academic leaders may conduct seminars that will enlighten the students about the positive and negative consequences of multiplayer online games.
3. Guidance counsellors may administer counselling to those gamers who are observed to be academically disturbed.
4. Teachers may devise interventions that will impact the emotional and cognitive interests of students to increase their overall level of academic interest.
5. Future researchers may conduct other researches that will focus on the sociality in multiplayer online games. This will widen the knowledge about what are the other factors affecting the sociality or interpersonal interactions in the virtual playroom and how does this factors affect the overall academic functioning of the gamer as a student.

ACKNOWLEDGEMENT

REFERENCES

[1] T. Manninen, "Interaction forms and communicative actions in multiplayer games. In game studies." *The International Journal of Computer Game Research*, 1st ed., vol. 3, pp. 5–10, 2003.

[2] M. Grizzard, R. Tamborini, R. J. Lewis, L. Wang, & S. Prabhu, "Being bad in a video game can make us morally sensitive," *Cyberpsychology, Behavior, and Social Networking*, 8th ed., vol. 17, pp. 499-504, 2014.

[3] B. Snow, "The potential for game- based learning to improve outcomes for nontraditional students," *Muzzy Lane Software Report*, 2016.

[4] F. Paraskeva, S. Mysirlaki, & A. Papagianni, "Multiplayer online games as educational tools: Facing new challenges in learning," Computers & Education, 2nd ed, vol. 54, pp. 498-505. January, 2010.

[5] P. Bawa, S. Watson, & W. Watson, "Motivation is a Game: Multiplayer Online Games as Agents of Motivation in Higher Education," Computer and Education, vol. 123, pp 174-194, 2018.

[6] L. Festinnger, A. Pepitone, & T. Newcomb, "Some consequences of deindividuation in a group," Journal of Social Psychology, vol. 47, pp. 382-389, 1952.

[7] U. Bronfenbrenner, "The ecology of human development: Experiments by nature and design," Harvard university press, 1979.

[8] C. M. Hughes, "A measure of social behavior in team-based, multiplayer online Games: The Sociality in Multiplayer Online Games Scale (SMOG)," 2015

[9] L. Festinnger, A. Pepitone, & T. Newcomb, "Some consequences of deindividuation in a group," Journal of Social Psychology, vol. 47, pp. 382-389, 1952.

[10] A. N. Joinson, "Self disclosure in computer mediated communication: The role of self awareness and visual anonymity," European Journal of Social Psychology, 2nd ed., vol. 31, pp. 177-192, January 2001.

[11] A. Bandura, "Moral disengagement in the perpetration of inhumanities," Personality and Social Psychology Review, 3(3), 193-209, 1999.

[12] Midha, V., &Nandedkar, A. (2012). Impact of similarity between avatar and their users on their perceived identifiability: Evidence from virtual teams in Second Life platform. Computers in Human Behavior, 28(3), 929-932.

[13] U. Bronfenbrenner, "The ecology of human development: Experiments by nature and design," Harvard university press, 1979.

[14] C. M. Hughes, "A measure of social behavior in team-based, multiplayer online Games: The Sociality in Multiplayer Online Games Scale (SMOG)," 2015.

[15] Clarke, D. (2003). Pro-social and anti-social behavior. New York: Routledge.

[16] T. Olthof, F. A. Goossens, M. M. Vermande, E. A. Aleva, & M. van der Meulen, "Bullying as strategic behavior: Relations with desired and acquired dominance in the peer group," Journal of School Psychology, 3rd ed., vol. 49, pp. 339-359, 2011.

[17] J. Mazer, "Validity of the student interest and engagement scales: Associations with student learning outcomes." Communication Studies 2nd ed., vol. 64, pp. 125-140, 2013.

[18] M. D. S. Cortes, J. V. Alcalde, & J. V. Camacho Jr. "Effects of computer gaming on High School students' performance in Los Baños, Laguna, Philippines." 国際公共政策研究, 16(2), 75-88. 2012.

[19] M. Simon, "Dissertation and Scholarly Research: Recipes for Success," *DisssertationSucces*, 2011.

[20] C.-C. Wang, & C.-H. Wang, "*Helping Others in Online Games: Prosocial Behavior in Cyberspace*." CyberPsychology& Behavior, 3rd ed., vol. 11, pp. 344–346, 2008.

[21] W. Y. Tang & J. Fox, "*Men's harassment behavior in online video games: Personality traits and game factors,*" Aggressive Behavior, 6th ed. Vol. 42, pp. 513–521, 2016.

[22] J. Dublas, et. al., "*Internet Connectivity and Learning Interest among Bachelor of Science in Disaster Resiliency Management Students in Davao Del Norte State College.*" International Journal of Scientific Research and Engineering Development, volume 4, 2021.

[23] J. P. Mazer, "*Development and validation of the student interest and engagement scales,*" Communication Methods and Measures, vol. 6, pp. 99–125,2012.