Web-based Instruction: Analyzing students Satisfaction and Learning Interest

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Abstract: The relationship between student satisfaction and learning interest when their instructor uses the web as a learning platform was investigated in this study. Respondents came from two colleges of Western Mindanao State University. The participants age ranges from 18 to 22 years old and completed an online questionnaire. The data in this research was analyzed using descriptive statistics, independent samples T-tests, and Pearson correlation. The findings of this study revealed that when a teacher uses web-based instruction, there is a favorable association between student satisfaction and learning interest. The findings suggest that student satisfaction has a beneficial impact on their learning interest and that the more frequently teachers use the internet and multimedia, the more satisfied and interested students are in learning social studies.

Keywords: Web-based learning, students satisfaction, learning interest, social studies.

I. INTRODUCTION

With the sudden turnaround that happened in our educational setup due to the COVID-19 virus, web-based learning has become a necessity as teaching support in teachers' pedagogical approach and as a way of preventing the spread of the virus (Means & Neisler, 2020). Technological skills are becoming a requirement in teaching particularly this time that we abruptly changed from the physical classroom set-up to web-based learning. Web-based platform uses diverse online tools to aid teachers in presenting their topics. It provides an array of collaborative practices and audiovisual learning aids (Pahl,2003).

The use of online platform has received a considerable amount of attention due to the shift of the educational setting that the government has decided to avail to continue acquiring knowledge and skills despite the pandemic. (Lier,2003) assert that if the use of technology affect education in a positive way, then it shouldn't be just an option for teachers to utilize but it should have a room in facilitating interactive classes. However, we cannot deny the fact that the use of gadgets might cause inattentiveness during a class. Integrating technology in education is ascending and it is not impossible that the use of it in education will continue to rise (Hsu,2017). (Simonson et al., 2011) argued that regardless of what mode of instruction, either physical setup or online, learning outcomes can be the same depending on the activities planned to attain them.

 Despite numerous studies (e.g. Dhaqane,2016; Stankovska et al.,2021) discussing about students' satisfaction towards the use of the web as a platform in conducting classes, but only a few focuses on their satisfaction and learning interest when online instruction is used in their different subjects. Thus, this study aims to explore whether web-based teaching instruction affects the students learning interest and satisfaction particularly in learning Social studies. It is of interest to compare the outcome of this study to the existing researches regarding learners' attentiveness and fulfillment when the said platform is used in the context of teaching Social studies.

II. RELATED LITERATURE

Web-based

The world wide web has provided a new learning platform through utilizing the internet. For the past 10 years, the Internet has been significantly affecting several institutions in the society, particularly education (Papanis,2013). Teachers and students can now have classes based on the time they have agreed.

The world wide web has an enormous influence on students' achievement, satisfaction, and learning retention (Soegoto & Tjokroadiponto,2018; Xu& Kruck,2014). (Reppeto & Trentin,2011) stated that the transport of education through online are becoming conventional globally. (Renninger, et al.,2014) It is of interest to know that a study indicated that computer-aided learning contributes positively on students' knowledge acquisition and achievement of learning. However, Web-based pedagogy are often used for the sake of integrating it, without putting its effectiveness into consideration (Cook,2007). Nevertheless, the web still has a lot to offer in terms of learning instruction and that technology is still playing a huge role in education, particularly this time.

Students Satisfaction

Students hold onto the idea that education is essential to achieve their desired profession (Hee & Park,2009). The learning experience of students is associated with their satisfaction (e.g. courses and curriculum (Calik,2013; Sahin,2009). A lot of study has been made associated with the satisfaction of students as it suggests the quality of learning and performance of learners. For instance, (Eom,2014) conducted a study that showed high learning outcomes and student satisfaction correlation and that learning approaches affected learning outcomes.

The literature features the importance of studies with regards to the learning of students (e.g. satisfaction, learning style), as it assists the education experts in improving the instructional pedagogy (Harsasi & Sutawijaya,2018; Levin&Wadmany,2006). Students are concerned about the effectiveness of teaching in their courses. They have a query on the teachers' performance and competency in teaching the subject (Mete et al.,2018; Okogba,2016).

Studies have also stated that when the teacher uses the web as a mode of instruction, learner's perception of studying are on the higher intensity (Althaus,1997; Rennie,2012). However, according to (Turman & Schrodt,2005), the satisfaction of learners to their instructor and course will likely be negative when the technology used is insufficient or too much. This study has impacted the use of web-based teaching.

Learning Interest

A student's interest towards learning is a condition in which the child has more focus, perseverance and perceptual participation. (Deci & Ryan) also stated that it's one of the element that contribute to students' motivation to learn and explore more details on their own. From the study conducted by (Hwang and Chang,2011), they have revealed that Web-based learning increases the learning achievement and encourages learning interest of learners. Students nowadays have specific assumptions during a class, and one of that is integrating technology in their teacher's method of teaching. When these expectations are not met, it may affect their learning satisfaction (Turman & Schrodt,2005).

Research questions

 RQ 1: How do students perceive their teachers when teachers utilize web-based teaching tools in teaching?

 RQ 2: What kind of relationship exists between a teacher utilizing more web-based support devices in teaching and students' learning satisfaction?

RQ 3: Is there a significant difference on students' satisfaction and learning interest when grouped according to gender?

RQ4: Would students' learning satisfaction toward teachers who utilize web-based teaching support impact their Social studies learning interest?

III. METHODOLOGY

Research design

This study utilized a descriptive- correlational research design with a quantitative approach. This present study aims to investigate the relationship of learners learning interest and satisfaction if the teachers utilize a web-based platform for

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ISSN 2349-7831

International Journal of Recent Research in Social Sciences and Humanities (IJRRSH)
Vol. 9, Issue 2, pp: (67-75), Month: April - June 2022, Available at: www.paperpublications.org

learning Social Studies. Additionally, this paper aims to appraise the variables via online survey method and the generation of data is involved, this type of method substantiates to a quantitative type of study and the researcher does not have control over the variables (Kothari, 2004 in Alieto, Abequibel, & Ricohermoso, 2020).

Research tool

This paper made use of the questionnaire established by Hsu (2017) entitled "Use of Internet and E- Learning Student satisfaction survey". The subject in items 6,7, and 8 were changed to fit the study and that is from English subject to social studies. The viability of the content of this research tool has been set in Hsu's study in 2014. The Cronbach score of the original questionnaire was .876 and in this study the Cronbach alpha score is .880. Numbers focusing on the traditional instructional method were reverse coded, these were items 7,8 and 13.

The researcher conducted a pilot study since there were minor changes in the questionnaire,30 students participated in the pilot testing who were not part of the final respondents of this paper. Participants were students who study subjects under Social Studies, and they completed the slightly modified questionnaire. The questionnaire consists of 16 items that can be answered with a 5-point Likert scale ranging from strongly agree to strongly disagree.

Respondents

The sample size of this study is composed of 64 students who study Social Studies. Respondents were from the College of Teacher Education who majors in Social Studies 23 (35.9%) and College of Liberal Arts students who particularly studies History (6.3%), Economics (20.6%) and Political Science (38.1%).

In terms of gender composition, the majority are females which are 46 or 71% of the total population of this paper. Regarding participants age, it ranged from 18-23 with the mean score of 19.88(SD-1.35). The distribution of age group were 18 years old (9.3%), 19 years old (20.6%),20 years (22.2%),21 years old (21.4%), 22 (9.5%) and 23 (1.6%). For females, the youngest is 18 and the oldest is 22. Moreover, for males, the youngest is 18 and the oldest is 23.

IV. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

To find out the participants satisfaction when the teacher uses a web-based learning platform while teaching Social Studies, the responses from the "Use of Internet and E-learning Student Satisfaction" questionnaire were coded and ciphered initially in a spreadsheet. The researcher executed the Descriptive statistics to analyze the data presented in Table 1. Included in the presentation are the responses in every item of the questionnaire (frequencies and equivalent percentages), mean (M), and interpretation (Interp.) - 1.0 to 1.79 (Very Low Satisfaction [VLS]), 1.80 to 2.59 (Low Satisfaction [LS]), 2.60 to 3.39 (Enough Satisfaction [ES]), 3.40 to 4.19 (High Satisfaction [HS]), and 4.20 to 5.00 (Very High Satisfaction [VHS]).

Table 1.

RESPONDENTS SATISFACTION AND LEARNING INTEREST TOWARDS WEB- BASED INSTRUCTION

Statements	SA		A		UD		DA		SDA		Mean	Std. Deviation	Interpretation
	N	%	N	%	N	%	N	%	N	%			
1. Teacher's feedbacks are faster due to the use of the Internet.	3	4.7%	16	25	27	42.2	13	20.3	5	7.8	2.98	.984	ES
2. It makes me put more heart and effort into the course by using Internet.	2	3.1	19	29.7	23	35.9	15	23.4	5	7.8	2.97	.992	ALI
3. Via web-based learning, it makes me more satisfied with the course.			11	17.2	23	35.9	23	35.9	7	10.9	2.59	.904	LS
4. It enhances my interest in learning by using Internet.	1	1.6	19	29.7	20	31.3	16	25.2	8	12.5	2.83	1.047	ALI
5. It is convenient to use web-based learning resources.	5	7.8	22	34.4	22	34.4	11	17.2	4	6.3	3.20	1.026	ES
6. I like to use computer, the Internet, and multimedia to learn Social studies.	6	9.4	32	50	20	31.3	3	4.7	3	4.7	3.55	.907	HLI
7. I like the traditional way to learn Social studies.	13	20.3	17	26.6	9	14.1	11	17.2	14	21.9	3.06	1.468	ES
8. I don't like to learn Social studies through computer or multimedia.	2	3.1	16	25	23	35.9	15	23.4	8	12.5	3.17	1.047	ES
9. I like using the web-based platform to interact with classmates and the teacher.	3	4.7	30	46.9	14	21.9	9	14.1	8	12.5	3.17	1.135	ALI
10. I like using the web-based platform to turn in or upload assignment.	6	9.4	33	51.6	11	17.2	6	9.4	8	12.5	3.36	1.173	ES
11. I like using the web-based platform to take a quiz or midterm exam.	5	7.8	20	31.3	14	21.9	15	23.4	10	15.6	2.92	1.225	ES
12. I hope more teachers will teach Social studies using web-based teaching resources.	5	7.8	18	28.1	26	40.6	7	10.9	8	12.5	3.08	1.103	ES
13. I personally prefer traditional classroom to the web-based learning.	12	18.8	19	29.7	8	12.5	10	15.6	15	23.4	3.05	1.474	ES
14. I personally like the web-based learning more than traditional classroom.	3	4.7	10	15.6	18	28.1	20	31.3	13	20.3	2.53	1.126	D
15. I like the sense of diversity and richness of the web-based learning.	5	7.8	21	32.8	28	43.8	7	10.9	3	4.7	3.28	.934	ES
16. Overall, I am satisfied with the web-based learning.	1	1.6	16	25	26	40.6	15	23.4	6	9.4	2.86	.957	ES
Overall Student Satisfaction											2.70	.751	ES
Overall Learning Interest											3.12	.745	ALI

To answer the first research question "How do students perceive their teachers when teachers utilize web-based teaching tools in teaching?" The descriptive analysis of the data provided in Table 1.0 shows that participants level of satisfaction is identified to be with "Enough Satisfaction level" (M=3.00, SD-0.751). The highest mean value (M=3.55) belongs to the item "I like to use computer, the Internet, and multimedia to learn Social studies", 59.4% stated agree to strongly agree. In addition to this, 48.5% (agree-strongly agree) that they prefer web-based learning more than traditional classrooms. This suggests that the respondents are enough satisfied with their learning online using the Internet and multimedia in studying Social Studies. The result supports Hsu (2017) findings that student's perception of their learning satisfaction was enhanced with the aid of the web as one of the teachers' modes of instruction. The constancy of Hsu's study and this result can be ascribed to the fact that both the study was conducted online. As these authors (Beqiri et al., 2009; Prince et al., 2016) imply that students' evaluations are significant in determining their satisfaction towards the course. The more relevant they perceived the course is, the more engage and satisfied they get with online learning.

Level of Respondents Learning Interest towards the Use of Web-based Instruction

To find out the participants learning interest when the teacher uses a web-based learning platform while teaching, the responses from the "UIELSS" questionnaire were coded and encoded. Descriptive statistics were performed to analyze the data presented in Table 1.1. Included in the presentation are the responses in every item of the questionnaire (frequencies and equivalent percentages), mean (M), and interpretation (Interp.) - 1.0 to 1.79 (Very Low Learning Interest [VLLI]), 1.80 to 2.59 (Low Learning Interest [LLI]), 2.60 to 3.39 (Average Learning Interest [ALI]), 3.40 to 4.19 (High Learning Interest [HLI]), and 4.20 to 5.00 (Very High Learning Interest [VHLI]).

Table 1.1

Statements	SA		A		UD		DA		SDA		Mean	Std. Deviation	Interpretation
	N	%	N	%	N	%	N	%	N	%			
2. It makes me put more heart and effort into the course by using Internet.	2	3.1	19	29.7	23	35.9	15	23.4	5	7.8	2.97	.992	ALI
4. It enhances my interest in learning by using Internet.	1	1.6	19	29.7	20	31.3	16	25.	8	12.5	2.83	1.047	ALI
6. I like to use computer, the Internet, and multimedia to learn Social studies.	6	9.4	32	50	20	31.3	3	4.7	3	4.7	3.55	.907	HLI
9. I like using the web-based platform to interact with classmates and the teacher.	3	4.7	30	46.9	14	21.9	9	14.1	8	12.5	3.17	1.135	ALI
Overall Learning Interest											3.12	.745	ALI

The descriptive analysis of the data presented in Table 1.1 points out that the respondents were found to be possessing 'Average Learning Interest' (Mean – 3.12, SD- 0.745). It could be highlighted from the data that the integration of the Internet and multimedia as a platform to teach is one of the factors that supports students learning interest towards learning Social studies through the Web. This coincides with Harasim (2012) study that digitalized learning can happen and students can be more engaged with their studies.

Moreover, it could be noted that 19 (29.7%) students want to put more effort into studying Social Studies via the Internet and 30(46.9%) students like using the internet to interact with their teachers and classmates. This compliments Akmal et al., (2021) findings that digital learning promotes communication and social skills development.

It is surmised that one of the reasons for this is teachers' feedbacks are faster due to the use of the internet. However, it is interesting to note that 26(40.6%) students are 'Undecided' as to "Hoping that more teachers will use web-based teaching resources". Thus, it is supposed according to (Allen & Seaman, 2008; Gang & Shanxi,2015; Wang et al.,2019) in their studies that technological competency is needed in online teaching and teachers should be competent enough to facilitate and deliver the lesson online which can explain the finding.

Correlation: Respondents' level of satisfaction and teachers use of a teacher utilizing more web-based support devices

To find out the answer for research question 2 as to "What kind of relationship exists between a teacher utilizing more web-based support devices in teaching and students' learning satisfaction?", the data set was analyzed using a test of relationship, the parametric test known as Pearson Product Moment Coefficient (also known as Pearson r). Table 3 provides the analysis of the data.

Table 2

Variables	p-value	r- value	Interp.
Students' satisfaction	0.000*	.551	Significant
TUWBI			Significant

**. Correlation is significant at the 0.01 level (2-tailed).

It could be inferred from the table that there is a significant relationship since the p-value = 0.00 is less than α=0.05. This means that students' satisfaction moderately correlates with the teachers' use of digital tools as teaching support. Moreover, the relationship is recognized to be direct as the R-value is .551 which connotes to that teachers' use of the web as teaching instruction increases student satisfaction. Additionally, the strength of the variables relationship was found to be moderately positive (r- value =.551). This indicates that there is moderate correlation among the presented variables in Table 3.

Gender Difference on Students Satisfaction

To identify whether there is a significant difference on the participants' level of satisfaction on Web-based instruction across gender (male and female), the data was treated with the parametric statistical tool known as t-test for independent samples. The analysis is provided in Table 3.0

Table 3: Level of student's satisfaction on Web-based instruction across gender

Variables		Mean	SD	Sig. (2-tailed)
Dependent	Independent			
Level of Satisfaction on Web-based instruction	Male	2.81	0.89	0.461
	Female	2.65	0.70	

N-64: 18 Males, 46 Females

It could be inferred from the data set that there is no significant difference on students' level of satisfaction between the male and female respondents of the study. Both genders have revealed to experience 'Enough Satisfaction' with the teacher's use of the Web as a teaching platform. Thus, it can be implied that since the P-value (0.461) is more than 0.05, there is no statistical difference when grouped according to gender. This supports (Nguyen & Pham, 2021) study that gender is not one of the factors that influences students course satisfaction. This can be attributed to the fact that this study was conducted online and that the study sample were only small. Thus, the result of the finding, that there is no significant difference on the level of satisfaction between genders (male and female).

Gender Difference on Students Learning Interest

Table 3.1: Level of Learning Interest on Web-based instruction across gender

Variables		Mean	SD	Sig. (2-tailed)
Dependent	Independent			
Level of Learning Interest on Web-based instruction	Male	3.12	0.87	0.979
	Female	3.13	0.70	

N-64: 18 Males, 46 Females

From the data presented in Table 3.1, it can be deduced that there is no significant difference on respondents learning interest when grouped according to gender. Moreover, the participants in both genders are identified to have an 'Average Learning Interest'. Inconsonance to what (Alqurashi,2019) posits that students interest level are high when they find the course material helpful in their content apprehension of the learning material. Thus, it can be derived that gender is not a factor that impacts the learning interest of students towards web-based instruction.

Correlation: respondents' level of satisfaction and students learning interest

Table 3.2

Variables	p-value	r- value	Interp.
Students' satisfaction	0.000*	.613	Significant
Learning Interest			Significant

**. Correlation is significant at the 0.01 level (2-tailed).

In order to know the outcome for research question 4, Pearson correlation test was performed. From the table 3.2, it indicates that there is a significant relationship between the students satisfaction and learning interest towards the use of web-based learning while learning Social studies. This means that students' satisfaction moderately correlates with the respondents learning interest and that it learners' satisfaction impacts their Social studies learning interest. Additionally, the strength of the relationship was found to be moderately positive (r- value =.613). This suggest that there is a moderately positive association among the presented variables. Moreover, the r-value is .551 which entails that the relationship between the satisfaction and learning interest of students is direct, which means that as their satisfaction level increases, their learning interest towards learning Social studies increases as well

V.   SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The purpose of this study was to explore the relationship and its effect on students' satisfaction and learning interest when the teacher used the web as a learning platform while teaching Social studies. It also determined if there is significant difference on the level of student satisfaction and learning interest when participants were grouped according to gender. Furthermore, it investigates the relationship between student satisfaction and learning interest towards the teachers' use of web-based instruction in teaching SS. The study employed a descriptive-quantitative-correlational design and was conducted in Western Mindanao State University.

Three adapted statistical instruments were used to analyze the data and answer the 4 research questions. First, to find out students' perception of teachers utilizing more web-based teaching tools in teaching instruction, descriptive statistic test was performed. The data revealed that students like it when they utilize the computer, Internet, and multimedia to learn Social Studies. In addition 42.2% (agree-strongly agree) of students enjoyed the convenience of using a web-based learning platform. However, 43.8% of participants are 'Undecided' whether they like the sense of diversity and richness of using web-based learning. The result for the latter could be the lack of social interaction due to the online setting. As (Nguyen & Pham, 2021) found out in their study that interaction with peers and teachers were important factors of course satisfaction. On the other hand, it can also be deduced that students perception of their instructor utilizing web-based instruction for teaching Social studies is positive. One of the reasons is that they get feedbacks faster due to the utilization of messenger or other digital communication tools. Another reason could be the use of internet enhance students interest in learning as teachers can utilize varied platforms(e.g. classpoint, google classroom, canva, class dojo) for intereactive teaching and learning (Nandi, Hamilton, & Harland, 2015). As (Malkawi et al., 2021) propose in his study that in the time of pandemic, the satisfaction level of learners is high regarding the utilization of Internet as platform for learning.

Moreover, this finding should not be overlooked that is, in this study respondents are undecided (40%) as to hoping more teachers will teach Social studies using web-based teaching resources. It is supposed that the sudden shift from the traditional learning to online learning have affected learners' perception of web-based type of instruction. The integration of multimedia and other digital tools as a mode of instruction is a challenge for both the teachers and learners. Thus, implementing it needs a lot of practice to achieve an excellent outcome. These echoes (Repetto & Trentin,2011) study that implies that the use of digital tools and the web as teaching platform should be considered particularly in higher education institutions. In addition, (Whittier,2011) suggest that both teaching and learning experience can greatly be improved if teachers are competent enough in using the web as a mode of delivering course content.

Second, the Pearson correlation coefficient test indicated that there is a moderate positive relationship between a teacher utilizing more web-based support devices in teaching and students' learning satisfaction. These findings reveal that students nowadays don't only expect the traditional way of teaching instruction, they are also satisfied with the web-based type of instruction.

Third, t-test for independent samples revealed that there is no significant difference on students' satisfaction and learning interest when grouped according to gender. This finding withstands (Shrodt & Turmann,2005) study with 864 respondents that asserts that, females have higher levels of affect when instructors utilize technology moderately in the classroom. Furthermore, the Internet and digital tools have clearly influenced the teaching and learning process.

Although statistical data reveal that teachers use of the internet and multimedia as a platform for teaching have a positive relationship with student satisfaction and interest, 48.5% (vs 39%) of the respondents still prefer traditional classroom to web-based learning. This outcome could indicate that students are more comfortable in receiving instructions face to face rather than through the help of digital tools which is quite interesting given that learners are more technology savvy these days. It could be inferred that the reason for these was the abrupt change of learning due to the pandemic that we are currently facing for more than 2 years already. Nevertheless, it cannot be denied that one of the teachers crucial role is to guide, support and motivate their students with the most efficient way possible (Moore,1989).

Conclusion

The findings of this paper suggest that there is a necessity for educational instructors in general to be aware that students these days are expecting their teacher to utilize varied approaches for teaching. Social studies teachers indeed need to level up their mode of instruction to meet students' diverse learning styles and needs. Similar to the findings of (Hsu,2017) that posits about teachers need to ponder about the use of technology as a teaching method. As the results in this study indicates that student satisfaction associates positively with their teacher's utilization of the web as teaching instruction. At the same time, satisfaction impacts their learning interest in studying Social studies as well. The relationship is 'direct' which implies that as the satisfaction of learners increases, the learning interest rises as well. It should also be noted that gender does not have a significant difference on students' satisfaction and learning interest on the use of web-based instruction.

Limitations of the Study

The current paper poses some limitations that should not be overlooked. The sample size of this study was drawn only from the College of Teacher Education and College of Liberal Arts. Thus, results for others may vary because participants came from one school only. Future studies can conduct the survey on more student majors.

Data collection was a bit of a challenge since it was done online. The respondents are limited since the researcher is not familiar with other respondents from different course and the Internet is sometimes a bit slow on the participants end. Last limitation can be the "subject" that the teachers handle. If the teacher does not master the subject they teach. Then it can influence their drive to use the web as teaching platform.

Recommendation

Insights from this study recommends that the sample size should be larger with equal number of genders, or more participants drawn from different courses, age groups and with different socio-economic status.

However different subjects may vary in their teaching approach. Thus, it should "subject" be examined to be added in the questionnaire for supplementary purposes. The time for providing the questionnaire should also be considered as they participants to answer it hastily if they were not given enough time. The researcher also recommends that the 5-point Likert scale should be cut down to a 4 point-Likert scale removing the undecided choice. This is to have a clearer picture of the data and to attain the objective more effectively. The researcher suggests that if it is possible that teachers help their student in communicating with other participants. Then that would greatly help the researcher as well as for better study result.

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