ATTITUDES TOWARDS THE USE OF MULTIMEDIA AMONG THE TEACHERS AND ENGAGEMENT STRATEGIES IN AN ONLINE LEARNING ENVIRONMENT OF THE STUDENTS

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Abstract: This study aimed to determine which domains of attitudes towards the use of multimedia best influences engagement strategies in an online learning environment. This study utilized the non-experimental quantitative research design using descriptive technique involving teachers in Sarangani District, Davao Occidental Division, Philippines. The study was conducted on the second semester of school year 2020-2021. Research instruments on attitudes towards the use of multimedia and engagement strategies in an online learning environment were used as source of data. Using mean, pearson-r, and regression as statistical tools to treat the data, the study showed the following results: the level of attitudes towards the use of multimedia among the teachers is very high, the level of engagement strategies in an online learning environment is very high, there is a significant relationship between attitudes towards the use of multimedia among the teachers and engagement strategies in an online learning environment, and the indicator on attitude towards use in the variable attitudes towards the use of multimedia among the teachers is the domain that best influences engagement strategies in an online learning environment.

Keywords: Attitudes Towards the Use of Multimedia Engagement, Engagement Strategies in an Online Learning Environment, Quantitative Research, Philippines

1. Introduction

The educational learning landscape has dramatically changed over the years. As a manifestation, various changes have been implemented to consistently offer relevant education that addresses the growing needs of the learners. However, as the world is facing an unprecedented global health crisis brought by the pandemic, the education sector responds effectively through various innovations. This is innovations are breakthroughs designed to continue education amidst the health crisis and make it accessible to all students. One of these modalities is online learning which offers remote education right at the comfort of the home of the students (Banna, Lin, Stewart & Fialkowski, 2015).

Meanwhile, teachers have indispensable roles in delivering meaningful learning may it be in face-to-face or virtual and synchronous or asynchronous. In the case of students in the online learning modality, teachers must exhibit a high range of expertise in terms of their technological knowledge including their attitudes towards the use of multimedia. With teachers who are tech-savvy and proficient in multimedia skills, the students will be more likely to develop mastery of the competencies taught by the teacher (Anderson & Elloumi,2004).

On the other hand, students in an online learning environment must have both skills and strategies to navigate the new learning platform that is almost alien to them. As such, the students must be competent in utilizing engagement strategies in a virtual learning environment. However, given the limitations, these students are seen unprepared for the virtual classroom. As a result, the students are struggling in terms of establishing a learner-to-learner engagement while the class is ongoing (Bolliger & Martindale, 2004).

One of the issues face by the students in an online learning environment is the use a virtual lounge where they can meet informally to share common interests. Teachers have not designed a virtual lounge dedicated to students where they can share their ideas about the lesson of the day. As a result, learning has become limited and interaction has been inadequate (Dixson, 2010).

In the local context, one of the issues raised by the students in an online learning platform is their engagement of the content materials. As the screen time is monitored for health security, students are exposed only to a minimal interaction with the content usually in one format. This brings difficulty among the students in developing mastery of the lesson presented (Garrison & Cleveland-Innes, 2005).

The problem-situations mentioned are the experiences of the students in the online learning environment. The need to address the problem will ensure greater learning opportunities for the students. Hence, the researcher is prompted to conduct this study to address the knowledge gap in terms of finding relevant evidence in the local context regarding attitudes towards the use of multimedia among teachers and engagement strategies in an online learning environment of the students as the researcher has rarely come across with the same study on the same topic in the local setting.

Research Objectives

This study aims to find out which domain of attitudes towards the use of multimedia among teachers best influences engagement strategies in an online learning environment of the students. Specifically, this study sought to answer the following objectives:

1. To describe the level of attitudes towards the use of multimedia among teachers in terms of:
    1.1. perceived usefulness;
    1.2. perceived ease of use;
    1.3. attitude towards use, and
    1.4. intention to use.
2. To ascertain the level of engagement strategies in an online learning environment of the students in terms of:
    2.1 learner-to-learner engagement;
    2.2 learner-to-teacher, and
    2.3 learner-to-content.
3. To determine the significant relationship between attitudes towards the use of multimedia among teachers and engagement strategies in an online learning environment of the students.
4. To determine which domains of attitudes towards the use of multimedia among teachers significantly influence engagement strategies in an online learning environment of the students.

Hypothesis

The following hypothesis will be treated at 0.05 level of significance.

1. There no significant relationship between attitudes towards the use of multimedia among teachers and engagement strategies in an online learning environment of the students.
2. No domains of towards the use of multimedia among teachers significantly influence engagement strategies in an online learning environment of the students.

2. Methods

This study used a correlational approach to conduct non-experimental quantitative research. A major portion of quantitative educational research is non-experimental because many critical factors of interest are uncontrollable. Because non-experimental research is such an important strategy for many researchers, it is necessary to establish a classification system for non-experimental methods that is both highly descriptive of what we do and allows us to communicate effectively in an interdisciplinary research context. Correlational research designs determine the type and extent of a relationship between two naturally occurring variables.

3. Results

Level of Attitudes towards the Use of Multimedia among the Teachers

Presented in Table 1 is the level of *Attitudes towards the Use of Multimedia among the Teachers* with the overall mean of 4.29 with a descriptive equivalent of *very high* indicating that all enumerated indicators were always observed. The overall mean was the results obtained from the mean of the indicators for the specific items from the questionnaire intended for this particular indicator which is appended in this study. Among the enumerated indicators, *Intention to Use* obtained the highest mean of 4.33 with a descriptive level of *very high*.

As presented in the appended Table 1.2, the very high level of this indicator suggests that I tend to use multimedia materials in my class, I increase the occurrences of using multimedia materials in class, using multimedia materials in my class to enhance students' learning interest, I use multimedia materials to provide multi-approaches on teaching.

Perceived Usefulness obtained a mean score of 4.32 with a descriptive rating of *very high*. As depicted in the appended Table 1.3, the very high rating of this indicator suggests that using the multimedia material in my class helps me to control the pedagogy, using the multimedia material in my class enhances the teaching performance, I find the multimedia material useful in my class, Using multimedia materials makes it easier to catch individual students' needs.

Table 1. Level of Attitudes towards the Use of Multimedia among Teachers

Indicators	SD	Mean	Descriptive Levels
Perceived Usefulness	0.629	4.32	Very High
Perceived Ease of Use	0.731	4.28	Very High
Attitude towards Use	0.582	4.23	Very High
Intention to Use	0.653	4.33	Very High
Overall	**0.517**	**4.29**	**Very High**

Perceived Ease of Use had a mean score of 4.28 or *very high*. As illustrated in Table 1.4, the very high rating of this indicator suggests that It is easy to become skillful at using multimedia materials, I find it easy to apply the multimedia material in my class, Using multimedia materials is easy and understandable, Using multimedia materials is more flexible to teach than traditional one.

Attitude towards Use had a mean score of 4.23 or *very high*. As displayed in the appended Table 1.5, the very high rating of this indicator suggests that Using multimedia material in class is good, my using multimedia material in class is favorable, It is a positive influence for me to use multimedia material in class, I think it is valuable to use multimedia material in class.

Level of Engagement Strategies in an Online Learning Environment

Presented in Table 2 is the level of *Engagement Strategies in an Online Learning Environment.* Computations revealed an overall mean score of 4.29 or *very high,* indicating that the said respondents gave a *very high* rating. The score was derived from the mean scores of 4.38 or *very high* for3Learner-to-Learner Engagement, 4.28 or *very high* for Learner-to-Content, 4.26 or *very high* for Learner-to-Teacher. The indicator of *Engagement Strategies in an Online Learning Environment* that got the highest rating was Learner-to-Learner Engagement. The mean rating was taken from the strands in the indicator which are as follow: use a virtual lounge where they can meet informally to share common interests, interact with peers through student presentations, work

Table 2. Level of Engagement Strategies in an Online Learning Environment

Indicator	SD	Mean	Descriptive Level
Learner-to-Learner Engagement	0.619	4.38	Very High
Learner-to-Teacher	0.683	4.23	Very High
Learner-to-Content	0.617	4.28	Very High
Overall	**0.030**	**4.29**	**Very High**

collaboratively using online communication tools to complete case studies, projects, reports, and others, peer-review classmates' work, are required to rate individual performance of team members on projects.

Meanwhile, Learner-to-Content obtained a mean rating of 4. 28 or very high. The result of this indicators was taken from the strands of the questionnaire which are the following: interact with content in more than one format (e.g., text, video, audio, interactive games, or simulations), Students work on realistic scenarios to apply content (e.g., case studies, reports, research papers, presentations, client projects), Discussions are structured with guiding questions and/or prompts to deepen their understanding of the content, Students research an approved topic and present their findings in a delivery method of their choice (e.g., discussions forum, chat, web conference, multimedia presentation), Students have an opportunity to reflect on important elements of the course (e.g., use of communication tools, their learning, team projects, and community).

On the other hand, Learner-to-Teacher obtained a mean rating of 4.23 or very high. The rating was taken from the strands of the indicators which include: provides students with an opportunity to reflect, posts grading rubrics for all assignments, uses various features in synchronous sessions to interact with students, refers to students by name in discussion forums, creates a forum for students to contact the instructor with questions about the course.

Correlations between Measures

Illustrated in Table 3 were the results of the test of relationship between the variables involved in the study. The overall correlation had a computed r- value of 0.799 with a probability value of $p<0.01$ which is significant at 0.05 level. Doing an in-depth analysis, it could be gleaned that the indicators of attitudes towards the

Table 3. Correlations Between Measures

Attitudes towards the Use of Multimedia among Teachers	Engagement Strategies in an Online Learning Environment			
	Learner-to-Learner Engagement	Learner-to-Teacher	Learner-to-Content	Overall
Perceived Usefulness	.463* (.000)	.507* (.000)	.563* (.000)	.589* (.000)
Perceived Ease of Use	.586* (.000)	.664* (.000)	.538* (.000)	.659* (.000)
Attitude towards Use	.586* (.000)	.526* (.000)	.587* (.000)	.660* (.000)
Intention to Use	.529* (.000)	.598* (.000)	.505* (.000)	.618* (.000)
Overall	**.662*** **(.000)**	**.724*** **(.000)**	**.709*** **(.000)**	**.799*** **(.000)**

*Significant at 0.05 significance level.

use of multimedia among teachers and engagement strategies in an online learning environment of the students revealed computed r-values ranging from .589 to .660 with probability values of $p<0.01$ which is lesser than .05 level of significance.

As evident in the table, the highest r-value and p-value for the correlation between attitudes towards the use of multimedia among teachers and engagement strategies in an online learning environment of the students was Attitude towards Use with 0.660 and 0.000 probability value. The data implied that Attitude towards Use was considered important attribute of engagement strategies in an online learning environment of the students. Perceived Ease of Use was also significantly related to engagement strategies in an online learning environment of the students with computed r-value of 0.659 and p-value of $p<0.01$.

Meanwhile Intention to Use was also significantly related to engagement strategies in an online learning environment of the students with r-value of 0.618 and p-value of $p<0.01$. The other important predictor of engagement strategies in an online learning environment of the students was Perceived Usefulness as evidenced by the computed r-value of 0.589 with p-value of $p<0.01$.

Significance of the Influence of Attitudes towards the Use of Multimedia to Engagement Strategies in an Online Learning Environment

Table 4 presents the regression analysis showing the predictive ability of on Engagement Strategies in an Online Learning Environment. The analysis shows that when Attitudes towards the Use of Multimedia was regressed on Engagement Strategies in an Online Learning Environment, it generated an F-value of 16.358

Table 4. Regression Analysis Showing the Extent of the Influence of Predictor Variables on Engagement Strategies in an Online Learning Environment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.828a	.685	.672	.3214424

a. Predictors: (Constant), Perceived Usefulness, Perceived Ease of Use, Attitude Towards Use, Intention to Use

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	43.604	8	5.450	52.751	.000a
Residual	20.045	194	.103		
Total	63.649	202			

b. Predictors: (Constant), Perceived Usefulness, Perceived Ease of Use, Attitude Towards Use, Intention to Use
a. Dependent Variable: Engagement Strategies in an Online Learning Environment

Coefficientsa

Model	Standardized Coefficients (Beta)	T	Sig.
1 (Constant)		2.575	.011
Perceived Usefulness	.031	.502	.616
Perceived Ease of Use	.017	.246	.806
Attitude Towards Use	.191	3.013	.003
Intention to Use	.052	.812	.418

b. Dependent Variable: Engagement Strategies in an Online Learning Environment

with p<0.001. The F value of this regression is 52.751 with p<0.001. It can be stated that Attitudes towards the Use of Multimedia significantly influenced Engagement Strategies in an Online Learning Environment.

Among the indicators of Attitudes towards the Use of Multimedia, only one gave a significant influence on Engagement Strategies in an Online Learning Environment, this is *Attitude Towards Use* with t=3.013, p<0.003.

Conclusion

With considerations on the findings of the study, conclusions are drawn in this section. The level of attitudes towards the use of multimedia among the teachers is very high, the level of engagement strategies in an online learning environment is very high, there is a significant relationship between attitudes towards the use of multimedia among the teachers and engagement strategies in an online learning environment, and the indicator on attitude towards use in the variable attitudes towards the use of multimedia among the teachers is the domain that best influences engagement strategies in an online learning environment.

Recommendations

The results of this study revealed that level of attitudes towards the use of multimedia among the teachers is very high. The researcher recommends that the Schools Division Office of Davao Occidental may conduct training that will help improve the aspects of Attitude towards Use among the teachers to improve on this aspect.

Meanwhile, the study revealed a very high level of engagement strategies in an online learning environment. The researcher recommends that the district office may provide Learning Action Cell among the teachers on the topic Learner-to-Teacher to help teachers improve in this indicator.

The study found a significant relationship between attitudes towards the use of multimedia among the teachers and engagement strategies in an online learning environment. The researcher therefore recommends that the Department of Education may consider the provision of trainings or activities relative to the variables under study to help the school heads and teachers enhance on the indicators which are among the lowest in the indicators of the variables under study.

The study found that attitudes towards the use of multimedia as domain of attitudes towards the use of multimedia among the teacher's best influences engagement strategies in an online learning environment. The researcher recommends that school heads may provide sessions in Learning Action Cell among teachers for improvement.

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