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ICT Self-Efficacy of Teacher and Barriers to Online Learning among the Students

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Abstract: **This study aimed to determine which domain of information and computer technology self-efficacy of teachers best influences barriers to online learning among the students. 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 information and computer technology self-efficacy of teachers and barriers to online learning among the students were used as source of data. Using mean, pearson-r, and regression as statistical tool to treat the data, the study showed the following results: level of information and computer technology self-efficacy of teachers is moderate, the level of barriers to online learning among the students is moderate, there is significant relationship between information and computer technology self-efficacy of teachers and barriers to online learning among the students, and domains of information and computer technology self-efficacy of teachers significantly influence barriers to online learning among the students is communication.**

Keywords: **information and computer technology self-efficacy of teachers, barriers to online learning, inclusive learning environment, school administration and supervision.**

I. INTRODUCTION

The teaching and learning practice in the time of pandemic gives rise to the popularity of online learning as one modality chosen by the students. This modality is designed to implement the learning continuity plan. This learning format allows the teacher to deliver the lessons with the goal of making the students master the competencies in the absence of face-to-face instruction (Anderson, Wielicki & Anderson, 2010).

The self-efficacy of teachers in the field of information and computer technology is of advantage in delivering online teaching in the remote learning environment. The skills of teachers are essential to teach the lessons with ease and confidence. More so, the ICT skills of teachers will help them design lessons that will hold the attention of the students Brown, Murphy & Wade, 2006).

However, despite the skills of teachers in utilizing computer technology in remote learning, there are students who experience barriers in online learning. This is manifested by their profound inability to use online learning technology such as e-mail and the internet. Also, these students admit that they are not confident in expressing their ideas when they participate in the discussion compared to the physical classroom lesson Derouin, Fritzsche & Salas, 2005).

Added to the barriers to online learning experience by the students is their direct admission that they cannot learn in online as they can in the classroom with other learners and the teachers. True enough, these students are in dilemma as to how they can navigate online learning in a way that they feel confident to learn the lesson that are delivered by the teachers similar in the face-to-face instruction (Glazer, Hannafin, Polly & Rich, 2009).

In the local context, one of the barriers to online learning reported by the students is the idea that they would enjoy the learning experience significantly less online compared to being in the classroom with other learners and the instructor. This has prompted the teachers to design learning activities that are interesting and meaningful to the students. Likewise, teachers also attend upskilling to advance their pedagogical competence in handling online learning modality to better serve the students.

The problem-situations narrated are the true picture that depicts barriers to online learning among the students. The researcher prompted to conduct the research to arrest the problems and eventually eliminate the barriers to online learning among the students by providing recommendations that are worthy of considerations for educational practice. The need of the students to essentially develop necessary skills in online learning will be of advantage to help them develop lesson mastery. Hence, the researcher is prompted to conduct this study to address the knowledge gap as the researcher has rarely come across with the same study on the same topic in the local setting.

II. BODY OF ARTICLE

Statement of the Problem

This study aims to find out which domain of information and computer technology self-efficacy of teachers best influences barriers to online learning among the students. Specifically, this study sought to answer the following objectives:

1. To describe the level of information and computer technology self-efficacy of teachers in terms of:
   1.1. privacy and security;
   1.2. differentiation and learning, and
   1.3. communication.
2. To ascertain the level of barriers to online learning among the students in terms of:
   2.1 ability and confidence with online learning technology;
   2.2 effectiveness of online learning, and
   2.3 online learning enjoyment.
3. To determine the significant relationship between information and computer technology self-efficacy of teachers and barriers to online learning among the students.
4. To determine which domains of information and computer technology self-efficacy of teachers significantly influence barriers to online learning among the students.

Hypothesis

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

1. There no significant relationship between information and computer technology self-efficacy of teachers and barriers to online learning among the students.
2. No domains of information and computer technology self-efficacy of teachers significantly influence barriers to online learning among the students.

III. METHODOLOGY

Research Design

This study utilized a quantitative correlational design is a type of non-experimental research design used to determine whether and to what degree a relationship exists between two or more quantifiable variables. This study will find out the significance of the relationship between ICT self-efficacy of teacher and barriers to online learning among the students.

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Statistical Treatment

The following statistical tools were used in the analysis of data.

Mean. This was used to determine the level of ICT self-efficacy of teacher and barriers to online learning among the students

Pearson r. This was used to determine the significance of the relationship between ICT self-efficacy of teacher and barriers to online learning among the students.

IV. RESULTS AND DISCUSSION

Level of Information and Computer Technology Self-efficacy of Teachers

Presented in Table 1 is the level of Information and Computer Technology Self-efficacy of Teachers with an overall mean of 3.10 with a descriptive equivalent of moderate, indicating that all enumerated indicators were sometimes 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 as appended in this study. Among the enumerated indicators, *Differentiation and Learning* obtained the highest mean of 3.12 with a descriptive level of *moderate*. As presented in the appended Table 1.2, the mean ratings of the following items under this indicator were as follows: easily judge whether the information that someone has provided on social networking sites is correct, easily judge trustworthy information on social networking site, is fully aware of the consequences of my conduct on the internet, easily express my point of view on any online discussion forum, when i open any website, i can easily learn in a very short time how to use its features/functions.

Table I. Level of Information and Computer Technology Self-efficacy of Teachers

Indicators	SD	Mean	Descriptive Level
Privacy and Security	0.251	3.08	Moderate
Differentiation and Learning	0.170	3.12	Moderate
Communication	0.222	3.10	Moderate
Overall	**0.529**	**3.10**	Moderate

Communication obtained a mean score of 3.08 or *moderate*. As depicted in the appended Table 1. 3, the *moderate* level of this indicator suggested that teachers: easily report any ID, post, image or video as abusive/spam content on social networking sites that students mostly use, easily control privacy settings of social networking sites that students mostly use, easily recover my email/social networking account if students forget the password.

Level of Barriers to Online Learning among the Students

Shown in Table 2 is the level of *Barriers to Online Learning among the Students* with an overall mean of 2.91 with a descriptive equivalent of *moderate* indicating that all enumerated indicators were oftentimes observed. The overall mean was the result obtained from the mean of the indicators for the specific items from the questionnaire intended for this indicator which was appended in this study.

Among the enumerated indicators, *Ability and Confidence with Online Learning Technology* ranked the highest with a mean score of 3.05 or *moderate*. As appended in Table 2. 3, the level of this indicator suggested that students: I do not use online learning technology (such as e-mail and the Internet) very much, I use online learning technologies such as e-mail and the Internet for my own personal productivity but not so much for education or training purposes, I am learning online, but I am unsure of my skills when doing so, I have learned, or I am learning, online and feel comfortable and confident when I do so.

Effectiveness of Online Learning obtained a mean score of 3.02 or *moderate*. This result is taken from the strands of the indicator as appended in this study which are the following: I cannot learn as well online as I can in the classroom with other learners and the instructor, I really don't see much difference in my learning in an online learning environment compared to being in the classroom with other learners and the instructors, I learn better through online learning compared to being in the same room as other learners and the instructor, I would not see much difference in my learning in an online learning environment compared to being in the classroom with other learners and the instructor.

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Table II. Level of Barriers to Online Learning among the Students

Indicator	SD	Mean	Descriptive Level
Ability and Confidence with Online Learning Technology	0.063	3.05	Moderate
Effectiveness of Online Learning	0.097	3.02	Moderate
Online Learning Enjoyment	0.059	2.68	Moderate
Overall	**0.533**	**2.91**	**Moderate**

Online Learning Enjoyment obtained a mean score of 2.91 with a descriptive rating of *moderate*. As presented in the appended Table 2.4, this result is taken from the strands of the indicator which are the following: I really don't see much difference in my enjoyment between learning online and in the classroom with other learners and the instructor, I enjoy the online learning experience significantly less, I would enjoy the learning experience significantly less online compared to being in the classroom with other learners and the instructor, I would enjoy the learning experience significantly more online than being in the classroom with other learners and the instructor.

Correlations between Measures

Illustrated in Table 3 were the results of the test of relationship between variables involved in the study. The overall correlation had a computed value of 0.284 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 information and computer technology self-efficacy of teachers and barriers to online learning among the students revealed a computed r-values ranging from .371 to .284 with probability value of $p<0.01$ which is lesser than 0.05 level of significance. Hence the null hypothesis which states that there is no significant relationship between information and computer technology self-efficacy of teachers and barriers to online learning among the students is rejected.

Table III. Correlation between Information and Computer Technology Self-Efficacy of Teachers and Barriers to Online Learning among the Students

Information and Computer Technology Self-Efficacy of Teachers	Barriers to Online Learning among the Students			
	Ability and Confidence with Online Learning Technology	Effectiveness of Online Learning	Online Learning Enjoyment	**Overall**
Privacy and Security	-.155* (.010)	-.334* (.000)	-.030 (.615)	**.371*** (.000)
Differentiation and Learning	-.234* (.000)	-.077 (.205)	-.149* (.014)	**.095** (.116)
Communication	-.056 (.357)	.072 (.236)	.069 (.251)	**.044** (.468)
Overall	**-.262* (.000)**	**-.139* (.022)**	**-.156* (.010)**	**.284* (.000)**

*Significant at 0.05 significance level.

V. CONCLUSION

With considerations on the findings of the study, conclusions are drawn in this section. The level of information and computer technology self-efficacy of teachers is moderate, the level of barriers to online learning among the students is moderate, there is significant relationship between information and computer technology self-efficacy of teachers and barriers to online learning among the students, and domains of information and computer technology self-efficacy of teachers significantly influence barriers to online learning among the students is communication.

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VI. RECOMMENDATIONS

The results of this study revealed that level information and computer technology self-efficacy of teachers is moderate. The researcher recommends that the Schools Division Office of Davao Occidental may conduct training that will help improve the aspects of privacy and security, differentiation and learning, and communication among the teachers to improve on this field.

Meanwhile, the study revealed that the level of barriers to online learning among the students is moderate. The researcher recommends that the district office may provide Learning Action Cell among the teachers on the topic Instructional and ability and confidence with online learning technology, effectiveness of online learning, and online learning enjoyment to help students improve in this indicator.

The study found a significant relationship between information and computer technology self-efficacy of teachers and barriers to online learning among the students. 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 communication as indicator information and computer technology self-efficacy of teachers best influences and barriers to online learning among the students. The researcher recommends that school heads may provide sessions in Learning Action Cell on this topic among teachers for improvement.

REFERENCES

[1] Anderson, L. (2011). Teacher diversity: Do male and female teachers have different self-efficacy and job satisfaction? EGPA Conference 2011. Bucharest, Romania.

[2] Derouin, R. E., Fritzsche, B. A. & Salas, E. (2005) ‘E-learning in organizations’, Journal of Management, 31: 6, 920-940.

[3] Glazer, E., Hannafin, M., Polly, D., & Rich, P. (2009). Factors and interactions influencing technology integration in situated professional development in an elementary school. Computers in the Schoools, 26(1), 21-39.