



Correlation Between Computer Self-Efficacy Belief and Computer Value Belief during the New Normal

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Abstract

In the light of the New Normal, the students' attention has moved to computer technology. Thus, this research study investigated the VSU-Isabel students' computer self-efficacy and computer value during the New Normal. The study employed quantitative-descriptive research utilizing the mean and standard deviation of the student's responses in the survey items. It also employed a correlational approach in establishing the relationship between students' computer self-efficacy and computer value. A convenience sampling technique was used to arrive at a sample of 687 student-respondents from 1st year to 5th year. The research study revealed that the students are undecided if they can use computers compared to the other students. Also, it was found out that students agreed about the value of computers. Additionally, the study revealed a significant and low positive correlation, $r(685) = .387$, $p = .01$, between the students' computer self-efficacy belief and computer value belief during the New Normal. These findings recommend the expanded use of technology during the new normal, such as using different available digital platforms to develop the students' computer self-efficacy.

Introduction

A computer is an essential tool in facilitating students' learning. The computer contributes to efficient work. Without any warnings, the schools must change to online education or modular distance learning (Ancheta and Ancheta, 2020). The universities must make new strategies to teach the students in this new normal. It is easy for the teacher and students to cope with this new normal through a computer. Knowing the self-efficacy of the students towards the use of computers can help them to enhance their capability. The computer value belief is essential since the researcher can determine if the computer is helpful and can guide the students in the future. In this regard, this research study will identify the levels of the students in computer value beliefs.

Bandura (1986) defines self-efficacy as the judgment of the people of their capabilities to organize and execute the action. Self-efficacy means an individual's confidence in their ability to carry out a given course of action to accomplish a task (Bandura, 1997). According to Bandura (1997), it is a multidimensional construct with strength, generality, and level. Computer self-efficacy has a massive impact on students' assumptions towards computer use (Compeau & Higgins, 1995). Computer self-efficacy belief means that the person's belief in their ability to use the computer (Petty and Loboda, 2011). Computer self-efficacy plays an essential role among the students and teachers. Computer skills are associated with the effective use of computers (Deng, Doll, and Truong, 2004; Abdullah & Mustafa, 2019). Several students with low computer self-efficacy will get confused when they come across computers (Simsek, 2011; Abdullah & Mustafa, 2019). It will leave a negative belief of their ability. Students with

low self-efficacy will be more frustrated because of the obstacles to their performance, which will lower their capability (Compeau and Higgins, 1995). Students with a high computer self-efficacy level will have high expectations (Gülten et al., 2011; Abdullah & Mustafa, 2019) and increased confidence when using the computer. Another study revealed that computer self-efficacy increases performance and reduces computer-induced anxiety (Burkhardt & Brass 1990; Harrison & Rainer 1997).

Computer value beliefs mean that students believe that their principles are essential when they use a computer. The computer value beliefs analyze the students' purpose for engaging in a computer or task. The task-value belief for students has different components: the intrinsic value, the attainment value, and the utility value (Eccles & Wigfield 1995; Vekiri & Chronaki 2008). A student's value perspective believes that something is good and desirable and either a conscious or unconscious motivator (Haralambos, 1997; Eccles & Wigfield 1995). According to Singh et al. (2007), self-efficacy and value beliefs are significant predictors of students' intention to enroll in optional computer courses.

This research study evaluated the computer self-efficacy belief and computer values belief for the new standard education. The study hoped to help the school, parents, and students conduct awareness about the importance of computers in education and how technological learning skills benefit the students. In addition, the study shared knowledge about computer self-efficacy and computer value belief. Also, it served as the basis for future researchers in their conduct of study related to the research topic.

This research study aimed to establish the students' computer self-efficacy belief in the new normal, students' computer value belief in the new normal, and the correlation between the students' computer self-efficacy and students' computer value

Methods

Participants

The respondents of this research study were 1st to 5th-year college students of Visayas State University-Isabel SY. 2020-2021 that were selected using a convenience sampling technique. The researchers informed the participants via messenger, email, and text messages. Out of the total student population of 1,121, only 687 (61.28%) students responded. The researchers used the Google form to survey in the first two weeks of February 2021. Then, data was retrieved in the third week of February 2021.

Research Instruments

The research instrument was web-based and administered using Google Forms. It is composed of three different parts: (1) Demographics; (2) Computer Self-Efficacy Belief questionnaire; and (3) Computer Value Belief questionnaire. The demographic characteristic includes the respondents' sex, age, course, and year level. The original Motivational Beliefs and Social Support (MBSS) survey consisted of 17 questions divided into four categories: Computer Self-Efficacy Belief, Computer Value Belief, Perceived Parental Support, and Perceived Peer Support. In this study, only two (2) categories from MBSS were included in the questionnaire: computer self-efficacy belief and computer value belief. These two categories composed the second and third part of the survey questionnaire consisting of 3 questions related to computer self-efficacy belief adopted from Vekiri & Chronaki (2008). It is measured on a five-point Likert scale (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, and 5=strongly agree). The third part of the survey questionnaire consists of 5 questions related to computer value belief adopted from Vekiri & Chronaki (2008). It is measured on a five-point Likert scale (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, and 5=strongly agree).

Data Analysis

The researchers utilized a correlational approach to establish a correlation between the computer self-efficacy belief and computer value belief. The SPSS and WarpPLS were both used to compute the correlation coefficient. The researchers also utilized the mean and standard deviation to establish the descriptive data on the survey questionnaires' responses

Results and Discussion

Table 1. Demographic Characteristics of the Respondents

	Frequency	Percentage
Sex		
Male	220	32
Female	467	68
Age		
20 and below	302	44
21 – 30	364	53
31 and above	21	3
Year Level		
1 st year	181	26.3
2 nd year	179	2.1
3 rd year	174	25.3
4 th year	99	14.4
5 th year	54	7.4
Course		
BEED	128	18.63
BPED	116	16.88
BSAB	115	16.74
BSED ENGLISH	58	8.44
BSED MAPEH	18	2.62
BSED MATH	46	6.69
BSED SCIENCE	32	4.65
BSIE	57	8.29
BSIT	39	5.67
BSME	78	11.35

Table 1 shows the demographic characteristics of the respondents. It shows that the majority of the participants are female (68%). Furthermore, 53% of the participants are 21 to 30 years old. The respondents of this research study were 1st to 5th-year college students of Visayas State University-Isabel SY. 2020-2021. The courses of the participants were Bachelor of Elementary Education (BEED - 18.63%), Bachelor of Physical Education (BPED - 16.88%), Bachelor of Science in Agribusiness (BSAB - 16.74%), Bachelor of Science in Education major in English (BSED English - 8.44%), Bachelor of Secondary Education major in Music, Arts, PE, and Health (BSED MAPEH - 2.62%), Bachelor of Secondary Education major in Math (BSED Math - 6.69%), Bachelor of Secondary Education major in Science (BSED

Science - 4.65%), Bachelor of Industrial Engineering (BSIE - 8.29%), Bachelor of Information Technology (BSIT - 5.67%), and Bachelor of Science in Mechanical Engineering (BSME - 11.35%).

Table 2. The Level of Computer Self-Efficacy Belief

Statements	N	Mean	Standard Deviation	Description
1. Compared to other kids my age, I know enough about computers.	687	3.38	0.87	Undecided
2. In general, I am good at computers.	687	3.15	0.88	Undecided
3. When I do something new on the computer, I am confident that I can do well.	687	3.28	0.88	Undecided
Overall Mean Rating	687	3.27	0.12	Undecided

Interval: 4.3 - 5.0 (Strongly Agree); 3.5 - 4.2 (Agree); 2.7 - 3.4 (Undecided); 1.9 - 2.6 (Disagree); 1.0 - 1.8(Strongly Disagree)

Table 2 shows the results of students' responses to a computer self-efficacy belief survey. The table revealed an overall mean of 3.87 which means that the students were *undecided* on their self-efficacy to computers. The standard deviations are close to zero and are less than the mean, which implies consistency of the respondents' responses. Among the three statements, statement 1 bears the highest mean of 3.38 (undecided), *compared to other kids of my age, I know enough about computers*. While the lowest mean is statement 2, *In general, I am good at computers*, with a mean of 3.15 (undecided). These findings revealed that during the new normal, the students of VSU-Isabel are *undecided* about their computer self-efficacy.

This level of the VSU-Isabel students' computer self-efficacy during the new normal has to be paid attention to in terms of academic policy and guidelines. According to the study of Fagan, et. al. (2016), computer self-efficacy is positively related to computer usage. It implies that online class activities with the VSU-Isabel students during this new normal may be affected since the students do not have a high level of competence in computer use which is affected by their computer self-efficacy.

Table 3. The level of Computer Value Belief

Statements	N	Mean	Standard Deviation	Description
1. It is useful to me to have computer skills.	687	4.02	0.72	Agree
2. I enjoy so much doing things with the computer that sometimes it is difficult for me to stop.	687	3.35	0.87	Undecided
3. It is important to me to be good at computers.	687	3.94	0.73	Agree
4. It is important to me to improve my computer skills.	687	4.13	0.72	Agree
5. Most professionals in the future will require computer skills.	687	4.13	0.72	Agree
OVER-ALL	687	3.91	0.33	Agree

Interval: 4.3 - 5.0 (Strongly Agree); 3.5 - 4.2 (Agree); 2.7 - 3.4 (Undecided); 1.9 - 2.6 (Disagree); 1.0 - 1.8(Strongly Disagree)

Table 3 shows the results of students' responses on a computer value belief survey. The table revealed an overall mean of 3.91 which means that the students *agreed* about computer value. Among the five statements, 4 and 5 bear the highest mean of 4.13 (agree), *it is important to improve my computer skills*, and *most professionals in the future will require computer skills*. It is followed by statement 1 with a mean of 4.02 (agree); *it is useful to me to have computers*. Then, the third-highest mean of 3.94 (agree) from statement 3, *it is important to me to be good at computers*. These findings revealed that during the new normal, the students of VSU-Isabel *agree* on the computer value.

This level of the VSU-Isabel students' computer value belief during the new normal can serve as a benchmark when crafting academic policies to ensure that teacher-student interaction with the aid of the computer is being strengthened.

Table 4. The correlation between the level of students Computer Self-Efficacy Belief and Computer Value Belief

		Computer Self-Efficacy Belief	Computer Value Belief
Computer Self-Efficacy Belief	Pearson Correlation	1	.387**
	Sig. (2-tailed)		.000
	N	687	687
Computer Value Belief	Pearson Correlation	.387**	1
	Sig. (2-tailed)	.000	
	N	687	687

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

Table 4 presents the correlation between the level of students' Computer Self-Efficacy Belief and Computer Value Belief. Using the alpha level (0.05) and degree of freedom (685), the researcher looked up a critical value in the r-table and found a critical value of 0.079. If Pearson r is greater than the r-table value, the researcher shall reject the null hypothesis. If Pearson r is less than the r-table value, the researcher must not reject the null hypothesis. Since Pearson r (0.387) is greater than the r-tabled value (0.079), reject the null hypothesis.

Out of the statistical treatment applied to the data from the survey, the researchers found out that the computer self-efficacy beliefs and computer value beliefs have a significantly low positive relationship, $r(685) = .387, p = .0000$. The degree of the strength and direction of the relationship between the students' computer self-efficacy beliefs is lowly related to the computer value belief among 687 VSU - Isabel students.

These findings on the relationship between students' computer self-efficacy and computer value belief during the new normal can significantly contribute to the administrative guidelines and policies. These can serve as a basis for enhancing teacher-student interaction during the new normal

Conclusion

In conclusion, the students in VSU- Isabel are undecided about their computer self-efficacy. It implies that the students in VSU- Isabel are still undecided if they can use a computer compared to the other students. Also, the students agreed about the computer value. It implies that the students in VSU- Isabel believe that computers are handy and essential since most professions will require computer skills.

The study shows that computer self-efficacy belief and computer value belief have a significantly low positive correlation with $r(685) = .387, p < 0.05$ among the 687 respondents.

The low computed value of r suggested a low positive relationship between the two variables among 687 respondents. It means that if computer self-efficacy belief is low, then computer value belief is also low.

These findings propose the following recommendation to the VSU- Isabel: expand the use of technology during the new normal; the school should use different digital platforms to develop the students' computer self-efficacy. Aside from google classroom, google forms and google meet, the school may use different platforms like schoology, canvas, zoom, and others. The teachers may show students different computer applications in answering their activities like canva, adobe, photoshop and others. Also, the teachers have to gradually give tasks from easy to moderate tasks using the computer. Later on, when the students have adeptly performed their tasks, difficult or challenging tasks may be given to the students. In this manner, it will boost students' ability level in using the computer. Also, it is recommended that future researchers formulate practical actions to address the issues and problems in technology.

References

- Abdullah, Z. D., & Mustafa, K. I. (2019). The Underlying Factors of Computer Self-Efficacy and the Relationship with Students' Academic Achievement. *International Journal of Research in Education and Science*, 5(1), 346-354..
- Ancheta, Ruel & Ancheta, Helen. (2020). *The New Normal In Education: A Challenge To The Private Basic Education Institutions In The Philippines?*, 1(1).
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*.
- Bandura, A., Freeman, W. H., & Lightsey, R. (1999). Self-efficacy: The exercise of control.
- Burkhardt, M. E., & Brass, D. J. (1990). Changing patterns or patterns of change: The effects of a change in technology on social network structure and power. *Administrative science quarterly*, 104-127.
- Compeau, D. R., & Higgins, C. A. (1995). Computer Self-Efficacy: Development of a Measure and Initial Test. *MIS Quarterly*, 19(2), 189. doi:10.2307/249688
- Deng, X., Doll, W., & Truong, D. (2004). Computer self-efficacy in an ongoing use context. *Behaviour & Information Technology*, 23(6), 395-412..
- Eccles, J. S., & Wigfield, A. (1995). In the mind of the actor: The structure of adolescents' achievement task values and expectancy-related beliefs. *Personality and social psychology bulletin*, 21(3), 215-225.
- Fagan, M. H., Neill, S., & Wooldridge, B. R. (2004). An empirical investigation into the relationship between computer self-efficacy, anxiety, experience, support and usage. *Journal of Computer Information Systems*, 44(2), 95-104.
- Gulten, D. C., Yaman, Y., Deringol, Y., & Ozsari, I. (2011). Investigating the Relationship between Curiosity Level and Computer Self Efficacy Beliefs of Elementary Teachers Candidates. *Turkish Online Journal of Educational Technology-TOJET*, 10(4), 248-254.
- Petty, G. C., & Loboda, I. P. (2011). Effects of Basic Computer Training on the Self-Efficacy of Adult Learner's Utilization of Online Learning. In *Encyclopedia of Information Communication Technologies and Adult Education Integration* (pp. 578-594). IGI Global.

- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of educational psychology*, 82(1), 33.
- Simsek, A. (2011). The relationship between computer anxiety and computer self-efficacy. *Contemporary educational technology*, 2(3), 177-187.
- Singh, K., Allen, K. R., Scheckler, R., & Darlington, L. (2007). Women in computer-related majors: A critical synthesis of research and theory from 1994 to 2005. *Review of Educational Research*, 77(4), 500-533.
- Teo, T., & Koh, J. H. L. (2010). Assessing the dimensionality of computer self-efficacy among pre-service teachers in Singapore: A structural equation modeling approach. *International Journal of Education and Development using ICT*, 6(3), 7-18.
- Vekiri, I., & Chronaki, A. (2008). Gender issues in technology use: Perceived social support, computer self-efficacy and value beliefs, and computer use beyond school. *Computers & education*, 51(3), 1392-1404.