ATTITUDES ON ICT INTEGRATION AMONG SPAMAST INSTRUCTORS IN THE NEW NORMAL

ABSTRACT

The study of attitudes on Information and Communication Technology (ICT) integration in the new normal was conducted at Southern Philippines Agri- Business and Marine and Aquatic School of Technology. Descriptive-research design was employed and a total enumeration of the respondents was used. Data were gathered with the used of adopted survey questionnaire and the data collected were subjected to statistical analysis using percentage, mean and frequency count.

The result of the analysis revealed that most of the respondents are female. Moreover, the SPAMAST instructors had very high positive attitudes of integrating ICT in teaching. Therefore, they are willing to learn more about effective ICT integration approaches to teaching and learning. With regards to obstacles faced by the teachers, it was revealed that a minimal obstacles faced by the teachers after incorporating it in teaching. The effort when integrating ICT tools in teaching, network connectivity, ICT tools are changing too fast to be up -to date and students lack of ICT skills were the obstacles faced by the teachers in integrating ICT in teaching.

Keywords: Attitudes, ICT, Integration, Spamast, instructors, New Normal

1. INTRODUCTION

The COVID-19 pandemic has affected the world's economy and as well as the educational system (Zethembe, 2020). As Philippines faced a critical situation due to the rise of the said health crisis, it has become urgent to explore innovative learning modalities that will facilitate migration from traditional to remote teaching and learning (Junaini, 2020). Higher Education Institutions (HEIs) in the country adopted a flexible learning scheme with the integration of Information and Communication Technologies (ICTs) (Legarde, 2022).

During the pandemic, e-learning resources were critical in assisting colleges and universities in facilitating student learning during the closing of universities and schools (Subedi, 2020).

Online platforms such as Google Classroom, Zoom, interactive learning environments, social media, and various community channels such as Messenger, WhatsApp, and WeChat are explored and tried for teaching and learning. Teachers are expected to come up with innovative ideas to help solve the drawbacks of virtual teaching. The teaching and learning process online is driven by the needs of the teachers and the learners. This is considered as the development of online learning with the use of technologies for it offered costs savings for the learners, teachers and the institution, increased flexibility of teaching and learning, and improved accessibility to education (Kirkwood & Price, 2017).

In the new normal setting, students and teachers agree to use a variety of e-learning resources (e.g. digital library, mobile applications, YouTube) with students using available tools (e.g. desktop computer laptop, tablet) and integrate their lessons in to online learning systems also known as Learning Management System (LMS) and meeting platforms (e.g. Edmodo, Google classroom, Zoom, Google Meet) for teaching and learning processes (Ramchmadtullah etal., 202). A Critical Review by Teachers on the Online Teaching-Learning during the COVID-19 according to (Hassan et al., 2020) resulted that the most important factor affecting online teaching is digital skills of teachers and students. Hence most of

the teachers are seen struggling to teach online and some of them are using easy but not very versatile tools to stay connected with students. Teachers are facing technical issues in creating e-content and in online delivery of instruction.

The implementation of the online learning system requires teachers to integrate educational technology in the preparation of lessons, choosing teaching strategies, designing learning assessment and evaluation, and improving class management (Juanda et al., 2021). In delivering content using online platforms, it is required to migrate the lesson, assessment tools, and audio-visual materials in an acceptable format needed by a software application (Gepila Jr., 2020).

Thus, this study is timely as it determines the attitudes on ICT integration among SPAMAST instructors in the new normal. Some study shows lack of information regarding on the integration of ICT to the new normal delivery mode of teaching and also some literature failed to mentioned the obstacles faced by the teachers or instructors of using ICT in teaching.

2. METHODOLOGY

The study was conducted at Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST), Malita, Davao Occidental, Philippines, in the four (4) institutes namely: Institute of Teacher Education and Information Technology (ITEIT), Institute of Human Services (IHS), Institute of Fisheries and Marine Sciences (IFMS) and Institute of Agricultural Technology and Entrepreneurial Studies (IATES).

SPAMAST adopted to new normal class setting through their Learning Management System and Learning Continuity Plan for the school year 2020-2021 to present. We choose SPAMAST as our respondent institution to contribute the school together with the instructors to integrate ICT in the new educational setting.

2.1 Research Design - The study was conducted employing the quantitative research method particularly the descriptive research design.

A descriptive study is to determine the attitudes on ICT integration among SPAMAST instructors in the new normal. Besides, this study also determines the teachers' obstacles faced during the integration of ICT in teaching.

2.2 Sampling Design and Technique The researchers applied total enumeration procedure as the study's sampling technique since all teachers of the four institute namely: Institute of Teacher Education and Information Technology (ITEIT), Institute of Human Services (IHS), Institute of Fisheries and Marine Sciences (IFMS) and Institute of Agricultural Technology and Entrepreneurial Studies (IATES) were the survey's respondents.

2.3 Respondents of the Study

The respondents of the study were the ITEIT, IHS, IFMS and IATES regular faculty members who are employed for the School Year 2021-2022 and teaching thru online distance learning modality at Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST) Malita, Davao Occidental. It was distributed throughout the four (4) institutes: Institute of Teacher Education and Information Technology (ITEIT), Institute of Human Services (IHS), Institute of Fisheries and Marine Sciences (IFMS) and Institute of Agricultural Technology and Entrepreneurial Studies (IATES).

2.4 Data Analysis

The data were gathered through answered google form and printed survey questionnaire from the respondents of Southern Philippines Agri-business and Marine and Aquatic School of Technology moreover, it was evaluated according to the respective range of means, description, and interpretation of data.

This study involves the gathering of data through flexible method google form and printed survey questionnaires. Moreover, researchers observed the following procedures in the gathering of data.

The researchers asked permission to the VPAA, campus director and school deans to conduct the study. The researchers gave orientation to the respondents regarding the purpose and objectives of this study. There were 66 faculty members at Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST). In addition, google form, and printed survey questionnaire were provided to gather the necessary data needed in the study. The teachers were given ample time to fully answer the questionnaires.

The researchers gathered the answered google form and printed survey questionnaire from the respondent, was tabulated for the collection and tabulation of data. All collected data were treated with utmost respect and confidentiality. The data gathered was tallied, collated, and tabulated for processing and analysis. The results were analyzed with the used of appropriate statistical tools as verified by the statistician.

3. RESULTS AND DISCUSSION

Table 1 shows the socio-demographic profile of the sixty-six (66) faculty members of Southern Philippines Agri-business and Marine and Aquatic School of Technology of Malita, Davao Occidental. As to the gender, the study revealed that 36 or 54.50% were female while 30 or 45.50% were male. In terms of age, it has the of mean 37.88, and data revealed the highest percentage of age, ranging from 30-39 or 31.82% and the lowest percentage is ranging from 60-69 or 4.55%.

In terms of length of service, it has the mean of 8. 53 and the highest percentage is ranging from 1-5 and 5-10 years with 9.1 %. Moreover, the lowest percentage is ranging from 1-5 months, 5-10 months, 10-15 years and 15-20 years with 1.5%.

Table 1. Socio- Demographic Profile of the Respondents

PARTICULARS	FREQUENCY (F)	PERCENTAGE (%)
AGE		
20-29	18	27.27
30-39	21	31.82
40-49	14	21.21
50-59	10	15.15
60-69	3	4.55
Mean=37.88		
GENDER		
Female	36	54.50
Male	30	45.50
LENGTH OF SERVICE		
1-5 months	1	1.5
5-10 months	1	1.5
10ms- 1 year	4	6.1
1-5 years	6	9.1
5-10 years	6	9.1
10-15 years	1	1.5
15-20 years	1	1.5
20–25 years	2	3.0
25-30 years	3	4.5
30-35 years	3	4.5
Mean = 8. 53		

Teacher's Attitudes on ICT Integration

The Table 2 shows the Teacher's Attitudes on ICT Integration. The Statement number 2 has the highest mean of 4.77 which described very high and indicates very high positive attitudes of teachers' integration of ICT in teaching. Moreover, statement 10 has the lowest mean of 2.04 which described low and indicates low attitudes of teachers' integration of ICT in teaching. The level of teachers' attitudes towards teaching with the integration of Information and Communication Technology (ICT) has its overall mean of 4. 45 which described very high and indicates very high positive attitudes of teachers' integration of ICT in teaching. The result is supported by Maru et al., (2021) stated that the teachers are more willing to adapt with ICT integration because of the eagerness to explore the features and attain new experience that they have. Furthermore, Barkat & Saeed (2021) supported that teachers have the positive attitudes in using the technology, and they are more likely to adopt the use of technology and apply it effectively.

Table 2. The level of teachers' attitude towards teaching with the integration of Information and Communication Technology (ICT)

PARTICULAR	MEAN	STANDARD DEVIATION	DESCRIPTION
1. The teachers would like to learn more about effective ICT integration.	4.74	O.50	Very High
2. The teachers would like to know what resources are available if the school decides to adopt ICT.	4.77	0.48	Very High
3. The teachers would like to know how ICT delivers better performance than traditional learning.	4.72	0.56	Very High
4. The teachers would like to know how ICT system increases school competitiveness.	4.68	0.61	Very High
5. The teachers would like to know how ICT integration improves the quality of interaction among students and instructors.	4.75	0.55	Very High
6. The teachers would like to know how to use technology.	4.74	0.50	Very High
7. The teachers would like to know what qualifications they must have.	4.66	0.56	Very High
8. The teachers will use ICT in learning and teaching in the future.	4.68	0.58	Very High

9.	The teachers plan to use ICT in school as part of learning and teaching often.	4.68	0.55	Very High
10.	The teachers are not concerned about ICT integration in school.	2.04	1.37	Low
Mean		**4.45**	**0.40**	**Very High**

Obstacles Faced in Using ICT

The Table 3 shows the obstacles faced by the teachers of using Information and Communication Technology in teaching. Statement number 1 “the teachers have to put in extra effort when integrating ICT tools in teaching”, has the highest mean of 4.03 which described high and indicates least obstacles faced by the teachers after incorporating it in teaching. Statement number 15 “the teachers lack confidence in integrating ICT tools in their teaching” has the lowest mean of 2.16 which described low and indicates a lot of obstacles faced by the teachers after in incorporating it in teaching.

The overall mean is 3.25 which described average and indicates minimal obstacles faced by the teachers after incorporating it in teaching. Based on the data gathered the effort when integrating ICT tools in teaching, network connectivity, ICT tools are changing too fast to be up -to date and students lack of ICT skills were the obstacles faced by the teachers in integrating ICT in teaching.

These reasons are seemed to be line with the study of Hafifah (2022) stated that the obstacles faced by the teachers in integrating ICT in teaching is mostly technical and internet connectivity. It was also supported by Salehi (2020) that insufficient technical skills and access to internet connectivity were the obstacles faced by the teachers in using ICT in the classroom.

Table 3. The level of obstacles faced by the teachers of using Information and Communication Technology.

PARTICULAR	**MEAN**	**STANDARD DEVIATION**	**DESCRIPTION**
1. The teachers have to put in extra effort when integrating ICT tools in their teaching.	4.03	1.10	High
2. The teachers do not have extra time to set up the ICT tools for their teaching.	2.97	1.08	Average
3. The teachers have problems getting quality training program.	3.21	1.10	Average

4. The teachers have difficulties getting support from technical staff.	2.90	1.14	Average
5. The hardware available is not sufficient to accommodate ICT supported teaching.	3.37	1.00	Average
6. The software available is not sufficient to accommodate ICT supported teaching.	3.37	0.92	Average
7. Certain software is difficult to learn and use.	3.39	1.09	Average
8. ICT tools are changing too fast to be up- to date.	3.89	0.97	High
9. The network connectivity is poor.	3.95	1.16	High
10. The hardware available is already outdated to accommodate ICT supported teaching.	3.31	0.82	High
11. The software available is already outdated to accommodate ICT supported teaching.	3.15	0.80	Average
12. Students lack ICT skills.	3.43	0.89	High
13. Students give negative feedback on ICT supported teaching.	3.09	0.77	Average
14. The teachers find it difficult to change from my current teaching practice to integrate ICT tools in teaching	2.48	0.93	Low

15. The teachers lack confidence in integrating ICT tools in my teaching.	2.16	0.92	Low
Mean	**3.25**	**0.55**	**Average**

4. CONCLUSION

The study in "Attitudes on ICT Integration Among SPAMAST Instructors in the New Normal" was conducted using quantitative study particularly a descriptive research design. It employed total enumeration of the respondents as the study's sampling technique. The data were gathered using adopted questionnaire particularly in the attitudes on ICT integration and the obstacles faced by the teachers in integrating ICT in teaching. Percentage, mean and frequency count were used in the data analysis.

The study revealed 4.45 mean which described very high and indicates very high positive attitudes of the teachers in integrating ICT in teaching. The grand mean of the gathered data was 13. 52 which revealed positive attitudes of incorporating ICT in teaching. Moreover, the highest mean of the gathered data shows, age raging from 30- 39 with the frequency of 21 and has its 31.82% which described the highest population who responded in the study. Furthermore, the lowest mean was 3. 25 which indicates minimal obstacles faced by the teachers in integrating ICT in teaching. According to the data gathered, the following statements have a high percentage of support: effort when integrating ICT tools in teaching network connectivity, ICT tools are changing too fast to be up -to date and students lack of ICT skills.

Based on the findings and statistical results of the study, the conclusions were drawn.

1. The socio- demographic profile revealed that most of the respondents are female and age ranging from 30-39 years old with the mean of 37.88, mostly 5-10 years in length of service and has the mean of 8.53.

2. The SPAMAST instructors shows very high positive attitudes in integrating ICT in teaching, with the overall mean of 4.45. This means that they are willing to learn more about effective ICT integration approaches to teaching and learning.

3. The SPAMAST instructors faced minimal obstacles in integrating ICT

in teaching, with the overall mean of 3.25. This means that the effort when integrating ICT tools in teaching, network connectivity, ICT tools are changing too fast to be up -to date and students lack of ICT skills were the obstacles faced by the teachers in integrating ICT in teaching.

Recommendations

Based on the conclusions made, the following recommendations are given.

1. The schools should have actions on promoting the teachers to implement ICT in the classroom by having training on the use of ICT.

2. The teachers should be open and willing to adopt for the advancement of technology especially with the integration of Information and Communication Technology (ICT) in teaching.

3. Future researchers could look further studies for the comparison of private and public schools based on what barriers that teachers are facing of using ICT in teaching and learning.

REFERENCES

ADEDOYIN, O. B., & SOYKAN, E. (2020). The COVID- 19 pandemic and online learning: The challenges and opportunities. Interactive Learning Environments.

AGUILERA-HERMIDA, A.P. (2020). The College students' use and acceptance of emergency online learning due to COVID- 19.

AMIT JOSHI AND MUDDU VINAY. (2020). Impact of coronavirus pandemic on the Indian education sector: perspectives of teachers on online teaching and assessments.

ARINTO, P.B. (2016). The Issues and challenges in open and distance-e-learning: Perspectives from the Philippines. International Review of Research in Open and Distributed Learning.

BARKAT, M., & SAEED, G. A. (2021). Covid-19 e Pinnacle of Technology Enhanced Teaching-Faculty Needs Assessment. In PROCEEDING ICME 2021 VIRTUAL CONFERENCE Excellence in Health Profession Education; Through Globalization & Collaboration.

BAO, WEI. (2020). COVID-19 and Online Teaching in Higher Education: A Case Study of Peking University. Hum Behav & Emerg Tech.

BASILAIA, GIORGI & KVAVADZE, DAVID (2020). Transition to online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. Pedagogical Research.

BOWER, M. (2019). Technology mediated learning theory and British Journal Education Technology.

BRUCE-KOTEY, C., DEMIR, F., & ALENIZE, F. (2018). What makes an LMS useful for a teacher?

CAHYADI (2020). Covid-19 Outbreak and New Normal Teaching in Higher Education: Empirical Resolve from Islamic Universities in Indonesia.

CARAIG, G.A., et al., (2021). Integration of e- learning system through mobile technology. International Journal of Computing Sciences Research.

DARKO-ADJIE, N. (2019). The Use and Effect of Smartphones in Students' Activities: Evidence from the University of Ghana, Legon. Library Philosophy and Practice (e-Journal), Article No. 2851. https://digitalcommons.unl.edu/libphilprac/2851

DOUCET, A., NETOLICKY, D., TIMMERS, K., TUSCANO, F. J. (2020). Thinking about pedagogy in an unfolding pandemic (An Independent Report on Approaches to Distance Learning during COVID-19 School Closure). Work of Education International and UNESCO.

FATHEMA, N., & AKANDA, M. H. (2020). Effects of instructors' academic disciplines and prior experience with learning management systems: A study about the use of Canvas. Australasian Journal of Educational Technology.

FRANCA, GLENFORD C. et al., (2022). Teachers' Resiliency and the Schools' Readiness To Distance Education. EPRA International Journal of Environmental Economics, Commerce and Educational Management.

FRANCA, GLENFORD C. et al., (2022). School Heads' Leadership Practices And Teachers' Perception On Schools Redadiness to Distance Education. EPRA International Journal of Environmental Economics, Commerce and Educational Management.

GABA, A. et al., (2021). Factors influencing the preference of distance learners to study through online during COVID-19 pandemic.

GEPILA Jr, E. (2020). Assessing teachers using Philippine standards for teachers. Universal Journal of Educational Research.

GOH, W. W., HONG, J. L., & GUNAWAN, W. (2017). Exploring Lecturers' perceptions of learning management system: An empirical study based on TAM. International Journal of Engineering Pedagogy (IJEP).

GUSTI NUR HAFIFAH (2020). Teachers Perspectives of ICT Integration in English Language Teaching: A Review of Literature.

HASAN, NAJMUL& BAO, YUKUN. (2020). Impact of "e-Learning crack- up" Perception on Psychological Distress among College Students during COVID-19 Pandemic: A Mediating Role of "Fear of Academic Year Loss". Children and Youth Services Review.

HASTINGS, T. A. (2017). Factors that predict quality classroom technology use (Doctoral dissertation, Bowling Green State University).

HOLLAND,B., & KELLOG, N. (2020). How phones can facilitate distance learning.

INAN, F., & LOWTHER, D. (2010). Factors affecting technology integration in K-12 classrooms: A path model. Educational Technology Research and Development.

JUAMDA, A.,SHIDIG,A.S., & NARSUDIN, D. (2021). Teacher Learning Management: Investigating Biology Teachers' TPACK to Conduct Learning During the Covid-19 Outbreak. Jurnal Pendidikan IPA Indonesia,

JUNAINI, S.N. (2020). Transitioning to Online Learning during COVID-19 Pandemic: Case Study of a Pre-University Center in Malaysia. International Journal of Advanced Computer Science and Applications.

KIRKWOOD, A., & PRICE, L. (2014).Technology-enhanced learning and teaching in higher education: What is 'enhanced' and how do we know? A critical literature review. Learning, Media and Technology.

KENECHUKWU, S. A., & Oboko, U. (2013). Information and communication technology in teacher education in Nigeria. International Journal of Educational Foundations and Management.

LEGARDE, M.A. (2022). The Adoption of Learning Management System

in Teaching and Learning in the New Normal.

LUCERO ET AL., (2021). Assessment of E- learning readiness of faculty members and students in the government and private higher education institutions in the Philippines.

MAGALONG, S. J. M., & PALOMAR, B. C. (2019). Effects of flipped classroom approach using Gooru learning management system on students' physics achievement.

MARAVILLAS et al,. (2021). Technology Needs Assessment for New Normal Education in Public Elementary School in Clarin, Bohol.

MARU G. et al., (2021). The Integration of ICT in ELT Practices: The Study on Teachers' Perspective in New Normal Era. https://doi.org/10.3991/ijim.v15i22.25533

MEE & ZAITUN (2006). In the study of „Obstacles Toward the Use of ICT Tools in Teaching and Learning of Information Systems in Malaysian Universities.

OSIESI, M. P. (2021). Addressing Teaching and Learning Challenges Amidst The Covid-19 Pandemic: Implications for The Nigeria Primary Schools. International Journal on Integrated Education.

OKMAWATI, M. (2020). The use of Google Classroom during pandemic. Journal of English Language. Teaching.

OTTER, R.R., SEIPEL, et al., (2013). Comparing student and faculty perceptions of online and traditional courses. The Internet and Higher Education.

PALMA, J.A.F.S., ODUCADO, R.M.F., & PALMA, B.S. (2020). The Continuing professional development: Awareness, attitude, and facilitators, and barriers among nurses in the Philippines. Nursing Practice Today.

RAMCHMADTULLAH et al., (2020). The Use of Blended Learning with Moodle : Study Effectiveness in Elementary School Teacher Education Students During The COVID-19 pandemic Use of Blended Learning with Moodle : Study Effectiveness in Elementary School Teacher Education Students during The COV.

RAZKANE, H., SAYEH, A. Y., & YEOU, M. (2022). University Teachers' Attitudes Towards Distance Learning During COVID-19 Pandemic: Hurdles, Challenges, and Take-away Lessons.

SALEHI AND ZEINAB SALEHI (2020). Challenges for Using ICT in Education: Teachers' Insights.

SANTIAGO, C.S.J., et al., (2021). The Access skills and constraints of Barangay officials towards the use of information and communication technology (ICT).

SETYAWAN,B.et al., (2020). Effects of the Google Meet assisted method of learning on building student knowledge and learning outcomes.

SIMIN GHAVIFEKR, FAIZAL, A. et. al., (2016). ICT Integration In Education: Incorporation for Teaching & Learning Improvement.

SHARMA et al., (2021). Pedagogical shift during COVID-19 pandemic: Emergency remote learning practices in nursing and its effectiveness.

SUBEDI, D. (2020). Explanatory sequential mixed method design as the third research community of knowledge claim. American Journal of Educational Research.

TINUNGKI, G.M. & NURWAHYU, B. (2020). Implementation of Google Classroom as the e- learning platform for teaching Non- Parametric Statistics during COVID- 19 Pandemic in Indonesia.

WEINBERGER, et al., (2016). The Weinberger, Reiserer, Ertl, Fischer, Mandl Facilitating collaborative knowledge construction in computer-mediated learning environments with cooperation scripts 2003.

WINGO, N. P., IVANKOVA, N.V., & MOSS, J.A. (2017). Faculty perceptions about teaching online: Exploring the literature using the technology acceptance model as an organizing framework. Online Learning.

ZETHEMBE, M. (2020). A Literature Review of E-Learning and E-Teaching in the Era of Covid19 Pandemic. International Journal of Innovative Science and Research Technology.