Research Journal of Education and Advanced Literature
Abbr. Title: Res J Edu Adv Lit
ISSN*(Online)***: 2945-395X**

OPEN ACCESS

Research Article Volume-01 | Issue-01 | 2022

Relationship of Technological Skills and Blended Learning Competency among Teachers of Local City College

*Maricor A. Marquez**

Philippines

Received 12-03-2022

Accepted 26-03-2022

Published 10-04-2022

Abstract: *Teachers' technological skills and blended learning competency play a very integral role in students' understanding, in offering assistance, and in taking the necessary steps to ensure students achieve learning objectives. The main objective of the study is to determine the teacher's level of technological skills in terms of Basic Computer Skills and Internet and Navigation Skills; determine the teacher's level of blended learning competency and the significant relationship between teacher's technological skills and teacher's blended learning competencies.*

The study employed a descriptive-quantitative research design using a modified survey questionnaire based on the National ICT Competency Standard of the Commission on Information and Communications Technology and Computer Literacy Questionnaire and NGLC Professional Learning Blended Learning Teacher Competency Framework to determine the teacher's level of technological skills and blended learning competencies among 18 teachers of the Local City College of Zamboanga City. It was concluded that the teacher-respondents are technologically skilled in terms of Basic Computer Skills and Internet and Navigation Skills. They were knowledgeable and equipped with the necessary skills on the basic components of a personal computer, the management of files and print documents, the uses of the internet and electronic mail for educational and personal purposes, and the tools for slides presentation. The teacher-respondents were competent in teaching in the blended learning modality. There was a moderate correlation between the teacher's level of technological skills and level of blended learning competency when analyzed. Teacher-respondents who were skilled in the use of technology were also competent in teaching in the blended learning modality.

Keywords: Skills, Technology, Teachers, Education, College.

INTRODUCTION

The New Normal education is a great transition and transformation from the old paradigm face-to-face classes to blended learning due to the global health crisis. The use of blended learning is the preferred model of learning and the most valuable technique to augment access to education. However, blended learning is a challenge for teachers in developing countries because of the bigger population of students and the low-level adoption of technology such as the development of the latest software, hardware, and capabilities on electronic communications (Gaol & Hutagalung, 2020).

Teachers' technological skills and blended learning competency play a very integral role in students' understanding, in offering assistance, and in taking the necessary steps to ensure students achieve learning objectives. It is the teacher's responsibility to effectively engage students in the blended learning process using higher-level thinking skills and encourage them to take ownership of their learning. Teachers are encouraged to master technological skills such as Word Processing, Spread sheet, Database Management, Electronic Presentation, Internet Navigation, Email Management, Networking and Touch Typing skills to name a few as they need to use desktop PCs, laptop PCs, and even mobile devices to perform their duties (Fort, 2017), to effectively and efficiently equip students with the necessary skills despite the challenging transition.

The CHED Memorandum Order No. 04, Series of 2020, set guidelines on the implementation of flexible blended learning by public and private Higher Education Institutions (HEIs) which was adopted beginning AY 2020-2021 and still extended until now due to the global health crisis. The teacher's capabilities specifically the teacher's technological skills and competencies are an essential factor to its success in Universities and Colleges.

The Local Universities and Colleges (LUCs) implement a blended learning modality to ensure that the Inter-Agency Task Force (IATF) protocols such as social distancing and limiting students to go outside of their homes for face-to-face classes are strictly followed (Hernando-Malipot, 2021). The advancements of technology and the current global health crisis lead to the demand of continually developing the technological skills and competencies of teachers in LUCs to be efficient and effective in equipping students with the necessary knowledge, skills, and attitudes in the blended learning environment. Only a few studies focus on the relationship of teachers' technological skills and teachers' blended competencies in Local Universities and Colleges (LUC) where teachers are expected to be skilled and competent in the use of technology to ensure lifelong learning and students' engagement. With this, the researcher embarked on this study to determine the relationship of technological skills

***Corresponding Author:** Maricor A. Marquez

and blended learning competencies among teachers in the Local Universities and Colleges (LUC) of Zamboanga City.

Statement of the Problem

The main objective of the study was to determine the relationship of technological skills and blended learning competencies among the teachers of Local Universities and Colleges (LUCs) in Zamboanga City. Specifically, this study intended to answer the following questions:

- What is the teachers' level of technological skills among Local Universities and Colleges (LUCs) in Zamboanga City in terms of;
  - Basic Computer Skills, and
  - Internet and Navigation Skills?
- What is the teacher's level of blended learning competency among Local Universities and Colleges (LUCs) in Zamboanga City?
- Is there a significant relationship between teacher's level of technological skills and teachers' level of blended learning competency?
- Based on the findings, what intervention program can be designed to address the deficiency of teachers' technological skills and blended learning competency?

Scope of the Study

This study focused on the relationship of level of technological skills and level of blended learning competencies among 18 teachers of the Local Universities and Colleges (LUCs) in Zamboanga City specifically the Colegio de la Ciudad de Zamboanga (CCZ) during the school year 2021-2022. The technological skills are delimited to ICT knowledge and skills in two domains: Basic Computer Skills and Internet and Navigation Skills. The blended learning competency focused on mindsets, qualities, adaptive skills, and technical skills of the teachers. Furthermore, the profile of the teachers such as age, number of technological training hours attended, length of service, and sex were included in this study to determine the significant difference in the level of technological skills. A modified survey questionnaire was used as an instrument.

Research Design

The study employed the descriptive-quantitative research design using a modified instrument in gathering data. It is descriptive because it determined a significant relationship of the level of technological skills in terms of Basic Computer Skills and Internet and Navigation Skills and the level of blended learning competency among teachers.

Respondents of the Study

Total enumeration was utilized because there were only 18 teachers, specifically ten (56%) in the Ayala Campus and eight (34%) in the Vitali Campus of the Local City College during the school year 2021-2022.

Research Instruments

The Survey Questionnaire, which is a modified questionnaire for technological skills and competencies, was used. The survey questionnaire with a 4-point Likert Scale was used related to teachers' technological skills adopted from Technical Skills, the National ICT Competency Standard of the Commission on Information and Communications Technology, and Computer Literacy Questionnaire and blended learning competency indicated on NGLC Professional Learning Blended Learning Teacher Competency Framework.

Ethical Consideration

The study was guided by appropriate research ethics and guidelines. Primary data were used in this study. Consent and permission from the respondents were gathered. The confidentiality of the respondents was maintained strictly to ensure the privacy of the respondents. Hence, the ethical aspect of the research was strictly implemented. The approval of the respondents to allow the researchers to present in the other forum or fora was ensured.

Data Gathering

The guidelines set by the Local City College were followed in the conduct of the study. Permission to conduct the study involving the 18 teachers of the Local City College was requested from the Local City College President. Data gathering was conducted in the respective faculty room and classroom of the teachers for the level of technological skills and blended learning competencies.

RESULTS AND DISCUSSION

1. **What is the level of teacher's technological skills among Local Universities and Colleges (LUCs) in Zamboanga City in terms of Basic Computer Skills and Internet and Navigation Skills?**

Research Journal of Education and Advanced Literature
Abbr. Title: Res J Edu Adv Lit
ISSN*(Online)*: **2945-395X**
OPEN ACCESS

Table 1. *Teacher's Level of Technological Skills for Basic Computer Skills*

Basic Computer Skills Indicator	Weighted Mean	Verbal Description
1. creates and saves a document	3.44	Skilled
2. changes text formats	3.33	Skilled
3. applies paragraph formats	3.33	Skilled
4. inserts headers and footers	2.94	Skilled
5. inserts tables	3.40	Skilled
6. inserts pictures/ images	3.06	Skilled
7. prints a document	3.39	Skilled
8. creates and saves workbooks	3.06	Skilled
9. inserts worksheets	2.94	Skilled
10. sorts data	2.61	Skilled
11. filters data	2.50	Less Skilled
12. creates formulas	2.50	Less Skilled
13. creates charts/graphs	2.56	Skilled
14. fits worksheet contents in a page before printing	2.56	Skilled
15. creates slides using different slide views	2.72	Skilled
16. applies appropriate visual design considerations	2.61	Skilled
17. applies slide with layout/design templates	2.67	Skilled
18. inserts pictures/images/ drawn objects	2.83	Skilled
19. applies transition/animation slide show effects	2.61	Skilled
20. prints selected slides/entire presentation	2.83	Skilled
Overall	2.90	Skilled

Legend: No Skills (1.0 - 1.50); Less Skilled (1.51 - 2.50); Skilled (2.51 - 3.5); Highly Skilled (3.51 - 4.0)

Table 1 shows that 18 out of 20 indicators in the Basic Computer Skills indicators in which the statement, "creates and saves a document" got the highest mean of 3.44 described as skilled. It implies that the teacher-respondents knew about creating and managing documents since they were exposed to module development and all works of teachers required the preparation of documents using office programs. The teacher-respondents were skilled in creating and saving a document because it is relative to the next statement "inserts tables" which got the second-highest mean of 3.39 described as skilled. It implies that the teacher-respondents demonstrated ability in managing text and inserting standard tables specifying the number of columns and rows in a document as necessary. Furthermore, the statement "prints a document" got the third-highest mean of 3.39 described as ready skilled. It implies that the teachers can print their outputs.

On the contrary, the statement "filters data" and "creates formulas" got the lowest mean of 2.50 described as less skilled. This implies that teachers were slightly prepared to filters data and create formulas thus, it is challenging for them to use the spreadsheet program perhaps they were not using them frequently in their work.

Furthermore, the teacher's level of technological skills in terms of basic computer skills overall weighted mean is 2.90 described as skilled. This implies that the teacher-respondents were skilled in using word processing, spreadsheet, and presentation tools on a computer. This result supports the findings of Moktar (2011) that many educators have mastered the basic skills in the use of technology.

Table 2. *Teacher's Level of Technological Skills for Internet and Navigation Skills*

Internet and Navigation Skills Indicator	Weighted Mean	Verbal Description
1. searches for information online	3.11	Skilled
2. navigates in the browser homepage buttons	2.83	Skilled
3. uses bookmarks	2.39	Less Skilled
4. enters Uniform Resource Locator (URL) by typing or	2.89	Skilled

***Corresponding Author:** Maricor A. Marquez

pasting		
5. saves file from the web	2.83	Skilled
6. opens an attachment	2.67	Skilled
7. prints all or part of a web page	2.78	Skilled
8. creates email address and password	2.83	Skilled
9. sends and receives messages	2.83	Skilled
10. stores and retrieves email messages	2.72	Skilled
11. sorts email messages	2.56	Skilled
12. organizes mail messages in a folder	2.50	Less Skilled
13. posts messages using appropriate netiquette	2.50	Less Skilled
14. creates an address book	2.39	Less Skilled
15. attaches file to a message	2.83	Skilled
16. fills out an online form	2.72	Skilled
17. participates in self-paced online tutorials	2.50	Less Skilled
18. utilizes online social media	2.94	Skilled
19. uses available video-conferencing application	2.50	Less Skilled
20. prints a message or selected contents of a message	2.83	Skilled
Overall	2.71	Skilled

Legend: No Skills (1.0 - 1.50); Less Skilled (1.51 - 2.50); Skilled (2.51 - 3.5); Highly Skilled (3.51 - 4.0)

Table 2 shows that 14 out of 20 indicators in the Internet and Navigation Skills indicators interpreted as skilled in which the statement, "searches for information online" got the highest mean of 3.11 described as skilled. This implies that the teacher-respondents were skilled in searching for information from a specific search engine. Consequently, the statement "utilizes online social media" got the second-highest mean of 2.94 described as skilled. This implies that the teacher-respondents were skilled in using online social media such as Facebook, Instagram, and other online platforms. The statement "enters Uniform Resource Locator (URL) by typing or pasting" got the third-highest mean of 2.89 described as skilled. This result signifies that the teacher-respondents were skilled in locating information and searching through the webpage.

On the contrary, the statements "uses bookmarks" and "creates an address book" got the lowest mean of 2.39 described as less skilled. This implies that the teacher-respondents were less skilled in bookmarking a web and in organizing the address book of their email account.

Furthermore, the teacher's level of technological skills in terms of internet and navigation skills overall weighted mean is 2.71 described as skilled. This implies that the teacher-respondents were knowledgeable about the concepts and terms associated with the Internet and electronic mail together and skilled in internet exploring and emailing for educational and personal purposes. This result opposes the findings of Kandasamy et al. (2013), in which their findings were a majority of the teacher-respondents had difficulties in internet browsing but they were knowledgeable on e-mailing.

Table 3. *Summary of Teacher's Level of Technological Skills in Terms of Basic Computer Skills and Internet and Navigation Skills*

Level of Technological Skills	Mean	Standard Deviation	Verbal Description
1. Basic Computer Skills	2.90	1.11	Skilled
2. Internet and Navigation Skills	2.71	1.17	Skilled
Grand Mean	2.81	1.14	Skilled

Legend: No Skills (1.0 - 1.50); Less Skilled (1.51 - 2.50); Skilled (2.51 - 3.5); Highly Skilled (3.51 - 4.0)

Table 3 shows the summary of teachers' level of technological skills in terms of basic Computer Skills and Internet and Navigation Skills. The level of technological skills of the teachers is skilled with an overall weighted mean of 2.81 described as Skilled in terms of Basic Computer Skills (2.90) and in terms of Internet and Navigation Skills (2.71).

The standard deviations are small which means the teacher-respondents are alike on their level of technological skills in terms of Basic Computer Skills and Internet and Navigation Skills. The result implies that the teacher-respondents are ready and equipped with the necessary knowledge and skills to use common computer applications in basic skills set. They are knowledgeable and skilled about the basic components of a personal computer, the management of files and print documents, the uses of the internet and electronic mail for educational and personal purposes, and the tools for slides presentation. Perhaps, they are skilled because they are already using the basic functions of Microsoft office programs in doing their work such as developing instructional materials (self-learning modules, hand-outs, midterm, and final term examinations) and necessary reports and documentation also utilizing the internet for personal and educational purposes.

The data indicates the teacher-respondents of this study as skilled only which supports the findings of Jamil et al. (2018) in their study about the ICT competencies of teachers at the university level in which the majority of the teacher-respondents were also competent in using Microsoft Word documents. They were able to save a document to a location on a drive, could switch between open documents, and create backups of important files. Likewise, the study of Kandasamy (2013) revealed that most respondents were knowledgeable in using applications such as MS Word, internet exploring, e-mailing, and MS PowerPoint. Additionally, it revealed that the majority of the respondents made use of ICT in teaching computer skills, communicating with colleagues, monitoring students' performance, and doing presentations. Additionally, the result of Rako (2016) study revealed that the teachers used office tools, cloud storage services, social networks, and collaboration tools mainly for their daily work. However, this result opposes the findings of Nacario *et al.* (2014) that the teachers were highly knowledgeable and highly skilled in identifying the ICT hardware and software components and highly competent in ICT usage.

2. What is the teacher's level of blended learning competency among Local City College in Zamboanga City?

Table 4. *Teacher's Level of Blended Learning Competency*

Blended Learning Competency Indicators	**Weighted Mean**	**Verbal Description**
1. focuses on student-centered learning	3.22	Competent
2. creates a flexible learning environments	3.28	Competent
3. values collaboration with various stakeholders	2.72	Competent
4. encourages students to be independent and self-directed learners	3.22	Competent
5. initiates change in response to students' needs and progress	3.22	Competent
6. perseveres in deliberate practice	3.17	Competent
7. maintains persistence, confidence, and optimism to resolve issues	3.17	Competent
8. helps others to look objectively at all results (both positive and negative)	3.11	Competent
9. balances individual initiative with teamwork	3.11	Competent
10. seeks to learn from and with other experts in the field	3.17	Competent
11. identifies a plan of action	3.22	Competent
12. seeks out feedback	3.33	Competent
13. applies lessons from learning experiences	3.28	Competent
14. uses technology	2.61	Competent
15. establishes open communication channels to students	3.33	Competent
16. assesses student progress against defined learning outcomes	3.28	Competent
17. evaluates instructional strategies with the use of technology	3.22	Competent
18. provides resources for students' demonstrations	3.28	Competent
19. demonstrates technical troubleshooting skills	3.22	Competent
20. uses learning management system	2.67	Competent
Overall	3.14	Competent

Legend: Not Competent (1.0 - 1.5); Moderately Competent (1.51 - 2.5); Competent (2.51 - 3.5); Highly Competent (3.51 - 4.0)

Table 4 shows that 20 out of 20 indicators in the blended learning competency interpreted as competent which statement, *seek out feedback, and establish open communication channels to students* got the highest mean of 3.33 described as competent. This implies that the teacher-respondents are competent in basic troubleshooting skills in the blended learning modality and communicate effectively to their students. Subsequently, the statements *create flexible learning environments, apply lessons from learning experiences, assess student progress against defined learning outcomes, and provide resources for students' demonstrations* got the second-highest mean of 3.28 described as competent. This implies that the faculty-respondents were competent in ensuring that the learning environment is conducive and that effective learning has taken place in the blended learning modality. Nonetheless, the five statements namely; *focus on student-centered learning, encourage students to be independent and self-directed learners, initiate change in response to students' needs and progress, identify a plan of action, and evaluate instructional strategies with the use of technology* got the third-highest mean of 3.22 described as competent. This implies that teacher-respondents were competent in ensuring that objectives are attainable with a proper plan and set of activities and that the working strategies and evaluation are appropriate to assess the attainability of these learning objectives.

Moreover, the overall mean for the teacher's level of blended learning competency is 3.14 described as competent. This implies that the teacher-respondents were competent in the blended learning modality. This result is related to Delen's (2015) study about teaching methodologies that the methods of teaching and assessing, the use of blended instruction via Internet-based environments, or computer-based testing via contemporary testing environment need to be revised.

3. Is there a significant relationship between teacher's technological skills and teacher's blended learning competency?

Table 5. *Correlation: Teacher's Technological Skills and Blended Learning Competency*

Variable	Coefficient of Correlation	p – value	Decision	interpretation
Technological Skills and Blended Learning Competency	0.558	0.016	Significant	Moderate correlation

Correlation is significant at the 0.05 level.

Table 5 shows that there is a significant relationship between the teacher-respondents level of technological skills and blended learning competency. The coefficient of correlation 0.558 with the corresponding probability value of 0.016 is significant at alpha = 0.05. This means that the teachers who have a high level of technological skills are the same one who has a high level of blended learning competency. Conversely, those who are highly skilled in the use of technology are the same ones who are highly competent in teaching in the blended learning modality.

CONCLUSION

Based on the findings, the following conclusions were drawn:

- The teacher's level of technological skills in terms of Basic Computer Skills and Internet and Navigation Skills is 2.81 described as skilled. It was concluded that teacher-respondents were knowledgeable and equipped with the necessary knowledge and skills on the basic components of a personal computer, the management of files and print documents, the uses of the internet, and electronic mail for educational and personal purposes, and the tools for slides presentation.
- The teacher's level of blended learning competency is 3.14 described as competent. It was concluded that teacher-respondents were competent in teaching in the blended learning modality.
- There is a moderate correlation between the teacher's level of technological skills and level of blended learning competency when analyzed. Teachers who were skilled in the use of technology were the same ones who were competent in teaching in the blended learning modality.

REFERENCES

1. ABS-CBN News (2021). *'No going back': CHED adopts flexible learning as norm*. https://news.abs-cbn.com/news/05/23/21/ched-flexible-learning-norm-colleges-universities
2. CHED Memo No. 04 Series of 2020. (2020). Guidelines on the Implementation of Flexible Learning. https://ched.gov.ph/wp-content/uploads/CMO-No.-4-s.-2020-Guidelines-on-the-Implementation-of-Flexible-Learning.pdf
3. Commission on Information and Communications Technology (CICT). (2012). National ICT Competency Standards for Teachers. National Commission on Information and Communications Technology.
4. Delen, E. (2015). Enhancing a computer-based testing environment with optimum item response time. *Eurasia Journal of Mathematics, Science & Technology Education, 11*(6), 1457-1472.
5. Fort, A. (2017). 8 Computer Skills For Every Teacher To Master. https://elearningindustry.com/8-computer-skills-every-teacher-to-master
6. Gaol, F. L., & Hutagalung, F. (2020). The trends of blended learning in South East Asia. *Education and Information Technologies*, *25*(2), 659-663.
7. Hernando-Malipot, M. (2021). Why is blended learning more difficult? Manila Bulletin Latest News. https://mb.com.ph/2021/03/23/why-is-blended-learning-more-difficult/
8. Kandasamy, M., & Shah, P. B. M. (2013). Knowledge, attitude and use of ICT among ESL teachers. *Proceedings of the Global summit on education*, 185-199.
9. Moktar, J. (2011). *Technology leadership and Teacher Competency in ICT at Islamic schools in the District of Kuching, Sarawak* (Unpublished Master Project Paper). Kuala Lumpur: Universiti Malaya.
10. Osea, G. B., Nacario, C. P., Foronda, V. R., & Lirag, M. T. B. (2014). Readiness and Acceptability of Information and Communication Technology Integration in Basic Education. *Asia Pacific Journal of Multidisciplinary Research*, *2*(1), 1-1.
11. Rako, S., Jandric, I., & Kucina, S. S. (2016). What Kind of ICT Training do University Teachers Need? From Office Tools to More Advanced Skills for Online Education. *ICERI2016 Proceedings*, 6351-6359.
12. Technology Competencies: Internet Skills (2015). *State Library's Continuing Education Advisory Committee. The Train Station*. North Carolina On the Right Track. https://statelibrary.ncdcr.libguides.com/tech_competencies2016/internet