The Impact of Technology Instruction Training Workshop to School Heads of Ministry of Basic, Higher and Technical Education (MBHTE) In Sulu

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ABSTRACT

This study examined how school administrators in Sulu's Ministry of Basic, Higher, and Technical Education (MBHTE) were affected by a training workshop on technology instruction. Using a descriptive research design with purposive sampling, the study was directed by three specific questions and one hypothesis. Eighty MBHTE-Sulu school heads took part in the survey. A structured questionnaire that was given out during the training workshop at the Sulu State College Gym was used to gather data. The collected data was processed using statistical analyses such as frequency distribution, percentage, mean, standard deviation, t-test, and ANOVA.

The results showed that the participants' comprehension of the advantages of technology, especially when using Google Classroom and Zoom for online classes, was greatly improved by the technology instruction training. This strengthened their belief in the value of these tools and gave them more authority as leaders in technology. Interestingly, the study did not find any discernible differences in the impact of the workshop among school heads according to their years of service, gender, or prior computer experience.

In light of these findings, the superintendent of the schools division should plan additional training for teachers and school administrators that emphasizes computer skills and a variety of software programs. The study also emphasized how technology can be used as a teaching tool to enhance the curriculum and raise academic achievement and learning outcomes for students. A mixed-methods approach could be used in future studies to investigate the effects of technology instruction as well as the opinions of school administrators regarding the use of technology in the educational setting. Furthermore, a study determining appropriate technology training courses for elementary schools in the Sulu Division is suggested.

Keywords: workshop,MBHT,technology Instruction,Division of Sulu

INTRODUCTION

Since education is a fundamental aspect of human life, it is a topic that is both highly relevant and popular in today's world. Students' performance is greatly impacted by high-quality education, and its impact is increased when it is coupled with contemporary technology. Nowadays, technology is an unavoidable part of daily life, changing the way people communicate, work, and learn. It has an impact in many fields, providing fresh approaches and making many difficult tasks easier. Many facets of life, including education, have significantly improved as a result of the integration of technology, making learning simpler and more effective.Learning and information sharing have become more interactive activities as a result of the incorporation of technology into education. According to Robbin Ghosh (2013), the biggest impact of technology on education is that it has the ability to open up minds—to change educational thought from a regional approach to a globalized thought.

Easy access to information, easy storage of information, improved presentation of information, interactive education, and the simplification and enjoyment of imparting knowledge are all effects of technology on education.Since the advent of technology, teaching and education (learning) have also undergone significant change. Schools and other institutions have adopted technology after realizing its necessity. It has been easier

for teachers to instruct and for students to learn since computers were introduced into classrooms. Education and instruction became more efficient with the advent of 4 technology (Robbin Ghosh, 2013).The Department of Education (DepEd) has mandated online classes for this school year 2020–2021 in order to reconcile the students due to pandemic of COVID-19. The challenges faced by school administrators in the Ministry of Basic, Higher, and Technical Education (MBHTE-Sulu) today differ from those faced by their predecessors, especially when it comes to the use of technology in teaching and learning. They must establish themselves as leaders in technology. However, the majority of MBHTE-Sulu school administrators are not exposed to new technology because they only participate in educational training on how to use online learning platforms like Zoom and Google Classroom. In order to achieve this, the School of Computer Science, Information Technology and Engineering (CSITE) at Sulu State College, Jolo, Sulu, has organized and offered a training workshop on the use of technology as a pedagogy to MBHTE school principals in Sulu. This training session focuses on understanding how to make the most of technology (such as Zoom and Google Classroom) to optimize online instruction and learning, and school administrators to optimize technology utilization. However, since this is the primary criterion for assessment, the impact of the training workshop must be determined when this new technology is utilized in online learning.

Statement of the Problem

The purpose of this study was to assess how a workshop on technology instruction training affected school heads in Sulu's Ministry of Basic, Higher, and Technical Education (MBHTE) during the 2020–2021 academic year.

Specifically, this research sought to address the following questions:

1. What is the demographic profile of the respondents concerning:

- Gender
- Age
- Highest Educational Attainment
- Years in service as a school head
- Technology training participation
- Level of computer experience

2. How much influence does technology instruction training workshop have on school heads of the Ministry of Basic, Higher and Technical Education (MBHTE)?

3. Do the Ministry of Basic, Higher, and Technical Education school heads' responses to the technology instruction training workshop differ significantly based on their gender, number of years of service as school heads, and degree of computer experience?

Hypothesis:

When data are grouped by school head's gender, years of service as a school head, and level of computer experience, there is no discernible difference in the impact of technology instruction training workshops among school heads of the Ministry of Basic, Higher, and Technical Education.

Objectives of the Study

This study was guided by the following objectives:

1. To determine the demographic profile of the respondents, specifically their:

- Gender
- Age
- Highest Educational Attainment
- Years in service as a school head
- Technology training participation
- Level of computer experience

2. To evaluate the extent of the impact of technology instruction training workshop to school head of Ministry of Basic, Higher and Technical Education (MBHTE) in Sulu.

3. To ascertain whether the impact of the technology instruction training workshop on school administrators in the Ministry of Basic, Higher, and Technical Education differs significantly based on their gender, number of years of experience as school heads, and degree of computer proficiency.

Theoretical Framework

The Concerns Based Adoption Model (CBAM), created by Hall & Hord (1987), serves as the foundation for this study's analysis of the effects of technology training. Research on the phases of teachers' concerns as they advance in their competence and skill as educators gave rise to this model. Since its inception, CBAM has received broad acceptance and empirical support in the fields of education and educational psychology. Its use outside of these domains, however, seems to be less well documented. For researchers from a variety of development-related disciplines, this model has a lot of promise, especially when it comes to better understanding the change process that comes with implementing technology. As was previously mentioned, this research suggests that teachers play a critical role in both the development of technology and effective instruction; their readiness to adapt is essential to the successful use of technology.

From their early schooling through their teacher preparation, a teacher's viewpoint on effective teaching is frequently firmly anchored in their own educational experiences (Tunks & Weller, 2009). These deeply rooted beliefs are often very enduring. Teachers must be persuaded of the benefits of technology integration for it to be successful, and their own altered habits and behaviors can best show this. Bringing about change entails modifications to beliefs, deeds, attitudes, and behaviors. We have chosen to use the CBAM model in this case, even though Rogers' (1983) theory of technology diffusion provides a strong framework for comprehending change processes. In addition to offering a theoretical framework, this model offers a useful perspective for carrying out our investigation and analyzing the results.

Importantly, our research can concentrate on teachers as the main agents of change thanks to the CBAM model (Donovan, Hartley & Struder, 2007). Because of this, it is a great framework for developing programs for teacher training and development and for putting new policies into effect (Khoboli & O'toole, 2011). The use of the CBAM model has expanded significantly in recent years, especially in research on computer integration in the classroom (Newhouse, 2001). This is because, rather than concentrating solely on the availability of new tools, directing technology interventions effectively necessitates an understanding of teachers' unique needs and interests. According to Loucks and Hall (1979), the CBAM model views change as an individual endeavor in which people alter their behavior either proactively or in response to external stimuli. While results like improvements in student test scores are frequently given priority by policymakers and aid organizations,technological interventions, our study specifically seeks to comprehend the effects of head teachers' training in technology instruction.This training has brought to light a number of important ideas. First of all, school principals play a crucial role in raising awareness of the integration of technology in the classroom because they understand that each person's journey with technology is very unique. Second, the training focuses on improving principals' collaborative effectiveness with peers as well as their own personal growth in terms of attitudes and abilities..

Conceptual Framework

Our conceptual framework is organized around the profile of the head teacher and is based on the theory that was previously discussed. This comprises independent variables like age, gender, years of experience as a head teacher, highest educational level, participation in technology training, and degree of computer experience. The effect of the technology instruction training workshop on school heads at MBHTE in Sulu is the dependent variable.

The relationship among the variables is shown in figure 1 below.

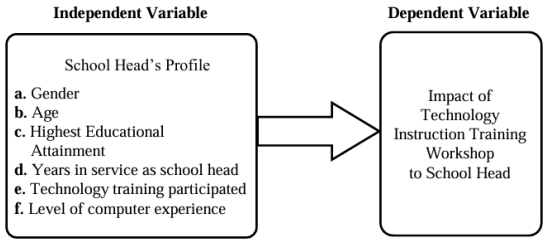

Figure 1. Conceptual Model of the Study

Significance of the Study

The results of this study are significant to the following:

1. School head. This study would inform the school head of the usefulness of technology and the positive impact of technology in online education. It enriches the development of his/her skills on how to use technology as instruction.

2. Lecturer. This study would enhanced professional career development of the lecturer by imparting information about technology which can improve knowledge of school heads by providing access to more and better educational resources, introducing applications like Google classroom and zoom use for good teaching practice to online class, catalyzing trainer–to–school head collaboration and increasing camaraderie.

3. Schools Division Superintendent. This study would gave encouragement to Schools Division Superintendent of MBHTE in Sulu to facilitate another training workshop for teachers regarding the importance of technology in education.

4. For Future Researchers. The insights generated by this study can provide a foundational resource for subsequent research investigating related topics.

Scope and Delimitation of the Study

This study was conducted at the Sulu State College Gym in Walled City, Jolo, Sulu. Every Saturday in September 2020, school administrators from various elementary and junior high schools, primarily in Sulu Province, were quarantined for a technology instruction training workshop. The impact of Google Classroom and Zoom on technology instruction is the main topic of this training session for Sulu's Ministry of Basic, Higher, and Technical Education (MBHTE) school administrators. As a result, it is restricted to sharing research on the effects of technology instruction following the training session. Future researchers will have to deal with other issues that might be considered researchable.

The delimitation of the study was also based on the study population. The study's population was restricted to the MBHTE heads of the chosen Sulu schools. Therefore, it is not possible to immediately extrapolate the study's conclusions to all school administrators across the province of Sulu. Purposive sampling was used to select this sample, and the results could only provide us with a general understanding and insight.

REVIEW RELATED LITERATURE

The researchers have examined many of the previous studies and literature related to the subject matter; the following is a review of those studies.

Effective integration of technology into schools is primarily a function of school climate and the leadership style of school leaders. According to Watts (2009), when school leaders encourage the use of technology and there is an open climate for its use, implementation is evident. Technology-literate leaders can provide better support for technology integration. Kistler noted that the most effective way to encourage technology is if administrators are themselves competent users of technology.

Proper planning and strong principal leadership are also central to achieving educational goals through technology use. Oblinger and colleagues (2005) stated that school leaders should have a strategic vision for technology, knowing what is available and how it can be used in instructional settings. Principals play a significant role in guiding schools towards technologically rich learning environments by staying current with developments.

To lead in the 21st century, administrators must be aware of technology's potential and instructional uses. Administrators are not only managers but also communicators and coordinators of school life. Their leadership must demonstrate vision, innovation, and cultivation of change, particularly in introducing new technology (Anderson & Dexter, 2005; Davis, 2008). By modeling the use of technology, administrators show teachers how it augments instruction, not replaces them.

Effective leadership involves promoting a culture of innovation. Leaders who know about and are favorably disposed towards technology help teachers to use it to enhance teaching and learning. Their example and commitment motivate others in the school community. Administrators must be willing to invest time and energy to make technology a part of the teaching process, rather than an occasional tool (Noeth & Volkov, 2004).

However, the majority of educators still feel unprepared to incorporate technology into instruction in spite of its growing presence in education. Since digital technology is now a part of daily life, educators must teach students how to use technology effectively. Instructional strategies must evolve, and instructors must alter their previous paradigms and accept the new technology-based methodologies (Sprague et al., 1998; Bitner & Bitner, 2002).

Professional development is central to equipping teachers to incorporate technology into teaching. Teachers must first learn about the tools, and then they must learn how to incorporate them into their instructional strategies. Development activities need to be ongoing, practice-based, and connected to curriculum goals. One-shot workshops with no follow-up support rarely lead to classroom practice changes that are maintained (Slavit et al., 2003; Dexter et al., 1999).

Most effective is collaborative, hands-on professional development. Teachers learn by being able to observe technology in use in other teachers' classrooms so they can see its impact (Lieberman, 1995; White et al., 2002). This begins to change their beliefs and motivates them to use technology in their own practice.

Online teaching can be enhanced using technology with digital tools like Google Classroom and Zoom. These tools support real-time communication, collaboration, interactive feedback, and paperless classrooms. Teachers, if effectively trained to utilize these tools, can make classrooms interactive and engaging for students.

As teachers move through stages of tech integration, they begin using it not just as a tool, but as a vehicle for creating more sophisticated learning environments. Technology becomes an integral part of teaching that maximizes student engagement, achievement, and preparation for a technology-driven world (Mills & Tincher, 2003; Miller, 2001).

Effective use of technology demands long-term and high-quality professional development. Teachers take three to five years and at least 80 hours of training to reach advanced stages of integration (Becker, 1994). Professional development commonly collapses due to a lack of content relevance, absence of follow-up, or ignoring teachers' personal needs (Mouza, 2002/2003).

Studies have shown principals' involvement in promoting technology. Serhan (2007) found that trained principals were more supportive and ready to utilize technology at schools. Others, including Smith (2011) and Bobbera (2013), found principal leadership and professional development to be positively influencing classroom technology utilization.

Finally, research stresses that educators need focused, skill-level training and ongoing support. Crane (2005) and Pierson (2001) discovered that teachers want specific ideas for integrating tech, especially younger instructors who might be familiar with tools but not their instructional use. Through high-quality professional development, instructors become more confident and are more likely to use digital content, which positively affects student learning outcomes (USDOE, 2000).

METHODOLOGY

This chapter details the study's methodology, including the research design, the setting of the study, the identification and selection of respondents, the instruments used for data collection, the procedure for gathering data, and the statistical methods applied to analyze the findings

Research Design

This study utilized a descriptive research design, employing a survey questionnaire as the primary data collection instrument. As noted by Kelley (2003), descriptive research aims to characterize and explain existing phenomena, focusing on current conditions, relationships, prevailing opinions, ongoing processes, observable effects, or emerging trends. This approach was deemed most suitable for evaluating the impact of the technology instruction training seminar on school principals within the Ministry of Basic, Higher, and Technical Education (MBHTE–Sulu). The questionnaire was specifically designed to gather the necessary information for the study.

Research Locale

This study was conducted at Sulu State College Gymnasium, Walled City, Jolo, Sulu where selected school heads' participants were confined for technology instruction training workshop.

Respondents of the Study

The respondents of the study were the selected school heads of MBTHE–Sulu during this school year 2020–2021. A total of 80 school head-respondents were selected 23 purposely from the total population (N=300) of the schools' administrators of MBTHE in the Province of Sulu.

Sampling Design

For this study, purposive sampling was employed to select the school heads from MBTHE in the Province of Sulu. This technique was chosen because it allows researchers to specifically target individuals who possess the desired knowledge relevant to the study's objectives (Myrna G. Cruz, et al., 2013)."

Research Instrument

The instrument used in the study is the Survey Questionnaire. The Survey Questionnaire patterned and adopted from worked of Connie M. Crane (2005). This survey questionnaire used to set up the socio-demographic profile of the school heads-respondents but suitable changes was made in order to fit the present study. The said instrument, Part I, is used to determine the gender, age, highest educational attainment, years in service as school head, technology training participated, and level of computer experience of the school heads. The 20

items from the survey questionnaire, Part II, are the statements possible impact of technology instruction training workshop to school heads of MBTHE in Sulu.

Data Gathering Procedure

1. The first step applied by the researchers for launching the questionnaire was, secured a permit from the Vice President for Academic Affairs of Sulu State College, Jolo, Sulu by presenting a request letter signed by the researchers.

2. After receiving the approved permission, the researchers presented the request permission to the Schools Division Superintendent of the Ministry of Basic, Higher and Technical Education (MBHTE) in Sulu Division before the survey was started in each selected respondent.

3. Before the administration of the questionnaire, the researchers oriented the school heads-respondents on the direction and explained clearly some items so that correct and honest responses maybe obtain. There are 80 school heads who serves as the respondents of the study. They answered the questions on the survey questionnaire distributed by the researchers. School head's respondent was the one to determine the impact of technology instruction training workshop to him or her.

4. When the task was duly accomplished, the questionnaire was retrieved, tabulated and were treated accordingly. It was submitted to the analysis of data assuming, that the collected data was normal, then it was interpreted and recommended based on the findings.

Statistical Treatment of Data

The collected data were analyzed using frequency and percentage to answer question number one (1). For question number two (2), mean and standard deviation were used to determine the level of the impact of technology instruction training workshop to school heads-participants and t-test and ANOVA were employed to answer question number three (3).

RESULTS AND DISCUSSIN

This chapter presents the summarized results of the study on the impact of a technology instruction training workshop among school heads of the Ministry of Basic, Higher and Technical Education (MBHTE) in Sulu. The results are presented based on demographic profile, impact of the workshop, and the significant differences based on selected variables.

Table 1. Demographic Profile of School Heads (n=80)

Category	Variable	Percentage (%)
Gender	Male	48.75
	Female	51.25
Age	30–40 years	35
	41+ years	65
Education	Bachelor's Only	18.75
	Bachelor's + MA Units	51.25
	Master's Degree	25

	Doctorate/Units	5
Years as Head	≤2 years	20
	3–4 years	43.75
	5+ years	36.25
Computer Training	Basic Use	43.75
	Integration & Others	37.5
	None	18.75
Computer Experience	Beginner	17.5
	Intermediate	53.75
	Experienced	28.75

Table 1 shows the demographic profile of 80 school heads. Most respondents were female (51.25%) and aged 41 or older (65%). Over half held bachelor's degrees with master's units (51.25%), and 36.25% had served as school heads for 5 or more years. The majority had participated in basic computer training (43.75%) and identified themselves as intermediate users of computers (53.75%).

A. Table 2. Summary of Impact Ratings

Impact Area	Mean	Interpretation
Understanding tech benefits	4.69	Strongly Agree
Improved tech knowledge	4.66	Strongly Agree
Use of Zoom/Google Classroom	4.60	Strongly Agree
Willingness to attend again	4.55	Strongly Agree
Student achievement impact	4.33	Agree
Leadership improvement	4.38	Agree
Collaboration fostered	4.35	Agree
Overall Weighted Mean	4.33	Agree

Table 2 summarizes the impact of the technology training workshop. Participants strongly agreed that the workshop improved their understanding of technology's benefits and tools like Zoom and Google Classroom. The overall mean of 4.33 indicates a high level of agreement, suggesting the workshop positively influenced the school heads' professional development and instructional leadership.

Table 3. Impact by Gender

Grouping Variable	Test Used	Computed Value	Critical Value	Interpretation
Gender	t-test	1.068	2.024	Not Significant

Table 3 reveals no significant difference in workshop impact between male and female school heads (t=1.068 < 2.024). This indicates that gender did not influence how participants perceived or benefited from the technology training.

Table 4. Impact by Years of Service

Grouping Variable	Test Used	Computed Value	Critical Value	Interpretation
Years in Service	ANOVA	2.459	2.467	Not Significant

Table 4 shows that the number of years served as a school head did not significantly affect the impact of the training (F=2.459 < 2.467). Regardless of experience level, all school heads equally benefited from the workshop.

Table 5. Impact by Computer Experience

Grouping Variable	Test Used	Computed Value	Critical Value	Interpretation
Computer Experience	ANOVA	1.028	3.159	Not Significant

Table 5 indicates that participants' levels of computer experience (beginner, intermediate, or experienced) had no significant effect on their perception of the workshop's impact (F=1.028 < 3.159). All groups found the training beneficial.

This research finding presents significant data about the demographic composition and technology exposure of school heads of the Ministry of Basic, Higher and Technical Education (MBHTE) in Sulu. Of the 80 respondents, the gender distribution is somehow equal in terms of few differences between female and male respondents. Most of the school heads are above 41 years old, which means most of them belong to the more experienced category. Educationally, more than half hold a bachelor's degree with master's units, and many hold a master's or even a doctoral level of education. Service-wise years, most of them have been in administrative service for four years and above. Most of them have received basic computer training, while some have had exposure to specialized technology integration courses. However, 18.75% of the respondents have had no formal training but believe themselves to be computer literate. Regarding exposure to computers, more than half rated themselves as intermediate users, with few others as beginners or experts, reflecting a middle level of technological competence among the respondents.

The second part of the study evaluated the impact of the technology instruction training workshop. The results indicated that the school administrators themselves concurred that the workshop significantly advanced their knowledge, skills, and attitudes in using technology. High mean scores indicate strong agreement that the training augmented their knowledge, more so of the benefits of technology, such as utilization of Google Classroom and Zoom. They also conceded that technology enhances collaboration, the students' engagement, and even leadership competencies. The majority of the respondents indicated enthusiasm to undertake future technology training as a sign of willingness to undertake continued professional development. Generally, the average weighted mean of 4.33 was reflective of high satisfaction with the training as well as its relevance to their professional roles. The findings validate that empowering school leaders to become technologically capable contributes to a culture of innovation and better instruction in schools.

Lastly, the study ascertained whether perceived impact of the workshop differed significantly on the basis of gender, years of service, and computer experience. There were no significant differences in effect within these subgroups. Male and female administrators, administrators with different lengths of service and levels of computer experience, profited equally from the training. This indicates that the training was useful and transferable to all participants' context. Such findings affirm that well-designed and inclusive training programs are capable of yielding uniform results across various groups. It further points towards the necessity of enduring, fair access to technology-oriented professional development to school leaders in order to facilitate

comprehensive integration of digital tools in the education sector. The congruence of findings between variables underscores the pivotal role of leadership in emulating and guiding successful technology integration in schools.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter synthesizes the key findings of the study, draws conclusions based on the accumulated results, and proposes recommendations to address the issues identified during the research process. The central aim of this work was to determine the impact of the technology instruction training workshop on school heads affiliated with the Ministry of Basic, Higher and Technical Education (MBHTE) in Sulu. Additionally, the study sought to uncover any significant variations in this impact when analyzed across different demographic factors, specifically the school heads' gender, tenure in service, and prior computer experience.

Summary of Findings

The demographic profile of the participating school heads indicated a majority were female, with most falling into the "41 years old and above" age bracket. Their educational attainment was predominantly a Bachelor's Degree, often supplemented with Master's degree units. In terms of service, the majority had served for five years or more. Regarding technology training, many participants had attended two previous training sessions, with some having participated in three to four. These trainings covered areas such as Basic Computer Use, Software Applications, Internet Usage, and Technology Integration, leading to an "Intermediate" rating for their experience level with technology.

Verbally, the school heads "Agreed" that the technology instruction training workshop had a positive impact. Furthermore, the analysis revealed no statistically significant differences in the impact of the technology instruction training workshop among the MBHTE–Sulu school heads when their responses were categorized by gender, years of service as a school head, or their level of computer experience.

Conclusions

Based on the findings presented above, the following conclusions were drawn: The technology instruction training workshop have positive impact to school heads of Ministry of Basic, Higher and Technical Education (MBHTE) because it enriches their understanding the benefits of technology on how to use Google classroom and zoom which convinced them more the value of using it in online class in this time of pandemic. The school heads of MBHTE–Sulu agreed that the impact technology instruction training workshop improved their knowledge in using technology and collaboration among school heads increases with this training which make them as technology leaders. As Crane, C. M. (2005) suggest that principals must be leaders of technology in their mission and vision for their schools. Since the finding was no significant differences exist of the impact of technology instruction training workshop among school heads of MBHTE–Sulu when data are classified according to their gender, years in service as school head, and level of computer experience. Therefore, this training workshop has almost same level of influence to the school heads.

Recommendations

Based on the study's findings and conclusions, the following recommendations are proposed:

1. The Schools Division Superintendent should facilitate further training for school heads and teachers on computer usage and various software applications.

2. Additional training should be provided for school heads and teachers, focusing on the impact and integrating technology in classrooms, and how to leverage technology to support learning and enhance the curriculum.

3. Professional development training should be initiated for school heads and teachers concerning the influence of technology instruction on student success.

Although this study's findings indicate no significant differences in the impact of the technology instruction training workshop among MBHTE–Sulu school heads when data are categorized by gender, years in service, or computer experience level, further quantitative and qualitative investigations are recommended.

This study suggests for further exploration:

1. A similar study on the impact of technology instruction and the perception of school heads on their role and responsibility for integrating technology in the classroom.

2. A study should be conducted to investigate the appropriate technology training program for elementary schools in the Division of Sulu.

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