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TEACHERS' E-SKILLS AND THEIR EFFECTS ON THE TEACHING AND LEARNING OF SANTA MARIA EAST DISTRICT

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Abstract

The study's context looked into how the e-skills of the Grade 3 teachers in Sta. Maria East District, Division of Davao Occidental, Region XI, affected their practice of teaching and learning and how it impacts the performance of the Grade 3 learners. The quantitative, descriptive-correlational design was used in this inquiry for the 17 participating schools comprising 209 research respondents. The study proceeded with the use of the survey questionnaire as the main tool for data gathering and data mining for the learners' proficiency level from the District Office of Sta. Maria East District. Results revealed that the status of teachers' access to digital technologies as to motivation access, physical access, skill access, and usage access is generally described as Very Evident based on the Likert scale with a mean range of 3.84-3.98. While the overall proficiency level of the Grade 3 learners is, generally, within 85-89 on the grading scale which is described as Very Satisfactory. With this verbal description, it means that the academic performance of the students is undeniably reasonable. With this, it is resolved that the e-skills of the Grade 3 teachers of Sta. Maria East District has a substantial weight that impacted teaching and learning resulting in learners' high performance.

Keywords: *E-skills, digital technologies, teachers' access, learners' performance, proficiency level*

1. INTRODUCTION

Digital inequality is deemed as the gap between those who have ready access to computers and the internet, and those who do not as in the gap between those teachers with sufficient knowledge of and access to technology and those without. This determines teachers' e-skills which may have relations to teaching-learning outcomes.

Coronavirus (COVID-19) has exposed the digital divide like never before and has made it a hot issue of actuality. It is apparent that scholars have not fully uncovered and investigated the digital divide. In reality, the first-level divide has received very little attention in current years from research inquiries. Moreover, a substantial amount of the literature has scrutinized the second digital divide in terms of e-skills. Reviews also disclose that the current research on the digital divide at the third level focuses merely on the individual consequences of internet use. (Aissaoui, 2022).

In education, digital inequality is defined as the gap between those with sufficient knowledge of and access to technology and those without. As teachers use more technology in their courses, this divide increases, and it continues to perpetuate socioeconomic disparities for underserved populations (School of Education Online Program, 2020).

A new survey of teachers during the pandemic shows that they need new and greater professional development and support, as well as instructional tools and student-facing resources to be successful during remote learning. It goes to say that the more digital services a teacher will be using, the higher their confidence level in using K-12 digital media in their teaching will be (Callanan, 2021).

Today's teachers did not grow up using computers, the internet, and other digital media daily. They are thus, continuing digital immigrants. Like all immigrants, they learn to adapt to their environment, but their teaching style, which likely reflects the way they were taught as children, may not match well with the learning styles of their digital native students. Children today not only have different learning styles but also different learning requirements. Youth growing up in this new millennium will require a broad range of understanding, skills, and attitudes suitable to today's knowledge economy and society that go, and these teaching and learning in the 21st-century skills are greatly facilitated by, and in many cases dependent on, the use of information and communications technology, thus further complicating the role of teachers facing all the other gaps (Birch, 2020).

Education is on the brink of disaster in this information age in which information and communication technologies (ICTs) have become the basis for world economies and social connectivity. People without access to the Internet and other ICTs are at a socio-economic disadvantage, for they are unable or less able to find and apply for jobs, shop and sell online, participate democratically, or research and in education.

As the global pandemic has thrown the digital divide into the spotlight, in the Division of Davao Occidental, specifically in Sta. Maria East District many educational leaders have made headway in bridging the digital divide in education. From providing access to computers to students to ensuring every student has internet connectivity, leaders are beginning to increase equity among districts and students. Yet, with the experience of digital divides, daunting challenges for teachers seeking to better meet the needs of a new generation through technology-enhanced learning, especially in low-income communities were greatly felt.

While the demand for digital equality of the new breed of learners in the new normal is pressing, teachers are in a quandary for antidotes to the reality that the digital divide is prevalent in most schools. Thus, added to the levels digital divide, an inquiry into digital inequality connected to new technologies, is offered in this research proposal.

The conceptual framework simplifies the direction of the study and the relationships between the different variables. The framework explains that the e-skills of Grade 3 teachers may have effects on their practice of teaching and learning.

This study aims to determine the Grade 3 teachers' e-skills in the practice of teaching and learning in Sta. Maria East District.

The results of this study will be crucial for teachers, students, and all other parties involved in the teaching-learning process.

The study will be delineated into the investigation of the relationship between e-skills among the Grade 3 teachers and the academic performance of the Grade 3 learners of Sta. Maria East District. The second quarter of the academic year 2022–2023 will serve as the direction for this, which will encompass Grade 3 learners' performance in the second grading period. Additionally, it will proceed with the participation of the teachers via th y.

2. MATERIALS AND METHODS

In this inquiry, the descriptive-correlational design will be used. Given the nature of the descriptive-correlational technique, the researchers will find it appropriate to present a picture of the current state of the digital gaps among Grade 3 teachers and Grade 3 learners' performance in Sta. Maria East District.

The study will be carried out at the 17 schools of Sta. Maria East, Division of Davao Occidental. The Cebuano community makes up the majority of the population in this region. The topographical location of this area is generally plain but with rugged terrain which has been the home of the schools of this district. In general, access to communication and transportation is good, and there is good access to electricity.

The study shall encompass a total of seventeen public elementary schools in Sta. Maria East District shall participate in the present study. The Grade 3 teachers are purposely chosen by the researcher as the research participants since she is handling learners in the third grade in this district. A total of 209 teachers shall participate in this study.

The researcher shall use a total enumeration that shall include all the Grade 3 teachers of the district. This indicates that the participation of respondents shall be based on the total number of Grade 3 teachers deployed in each school in Sta. Maria District.

As the primary research tool for gathering pertinent data, the researcher shall produce a questionnaire pertinent to the proposed study. The questionnaire will examine the e-skills among Grade 3 teachers of Sta. Maria East District. On the other hand, the data on the learners' performance shall be taken from the schools' second quarter proficiency level reports which are filed in Sta. Maria East District Office. This datum along with the other data gathered will be tabulated, analyzed, and interpreted.

To collect the necessary data, the researchers must first obtain permission from the relevant authorities. This study must be conducted in an organized fashion. The distribution and administration of the surveys in the field will start as soon as the permission is complete. The researcher has to present the primary source's findings. Then, he shall explain and draw conclusions based on the findings and analyses. These findings must be contrasted to and explained by the results of the secondary source. All of the collected data will be appropriately encoded, totaled, tabulated, analyzed, and interpreted. The following grading system will be applied to assess the student's academic performance:

In this study, to determine the teachers' access to digital technologies on the different levels and the academic performance of the Grade 3 learners' descriptive statistics such as frequency counts, percentage distribution, and weighted mean shall be used in analyzing the data that will be gathered.

3. RESULTS AND DISCUSSION

Status of Teachers' Access to Digital Technologies

The status of teachers' access to digital technologies in Sta. Maria East District was measured based on the Questionnaire on the Grade 3 Teachers' Access to Digital Technologies with the following indicators: motivation access, physical access, skills access, and user access.

Access Motivation. The first indicator of teachers' access to digital technologies which is access motivation contains ten items. The results of the survey in this indicator are shown in Table 2 with an overall mean rating of 3.92 with the descriptive equivalent of Very Evident.

The above information gathered from the respondents of this study explains that the grade three teachers in Sta. Maria East District has very evident access motivation to digital technologies.

The above implication supports the most important observation of the Cleveland Clinic (2022) that when technology began to diffuse through society more widely, the motivation to obtain digital media increased quickly. Even very
elderly people and people with low education were motivated to gain access, often afraid of being excluded from society or of not being able to communicate with grandchildren or family and friends.

Moreover, the result supports the supposition of Fang, et. al. (2022) that the technology acceptance theory, elements like perceived usefulness, ease of use, and subjective norms related to the concerned media might explain motivations and attitudes surrounding the intention to gain access. As technology develops and permeates daily life, all of these aspects become more important.

However, the finding negates the observation of Giacomo, et. al. (2020) that some negative phenomena like technophobia and computer anxiety have persisted, though they are no longer noticeable. In many nations, fear of computers and the internet remains a significant barrier to use.

Physical Access. The second measure of teachers' access to digital technologies, physical access has 10 components. Table 3 presents the survey's findings for this indicator. The overall mean score was 3.84, which has the descriptive equivalent of Very Evident.

The above information gathered from the respondents of this study explains that the grade three teachers in Sta. Maria East District has very evident physical access to digital technologies.

The conclusions of Fang, et. al. (2019) are supported by the inference above. Having more or less economic, social, and cultural capital was once believed to be one of the theoretical factors that would affect these differences in physical access. Others support a resource-based strategy that combines with a network approach to focus on social positions, resources, and connections in the workplace, in schools, and households. Although age is frequently cited as the main factor in the digital divide, this idea showed that age is not the only factor. Education, wealth, gender, and generational position are other characteristics that affect digital equity among communities.

Moreover, the finding supports the conclusion of Acharya (2017) that the multi-dimensional idea of the digital divide has changed over the past 20 years to consider numerous technological, socio-economic, socio-political, and socio-cultural factors. Although there isn't a single definition of the digital divide that is universally accepted, recent conceptualizations seem to be shifting away from the conventional emphasis on technological and economic differences.

The supposition of Fang, et.al. (2019) proves that the physical access digital divide has changed over time in a manner of roughly 50 years. A nation's physical access quickens at the initial tipping point. Additionally, the difference between early adopters and others, such as those with high and low incomes and levels of education, began to widen at that time. The difference between the socioeconomic categories that have access narrows at a second tipping point when the majority of the population in a nation has gained access.

Skills Access. The third indicator of teachers' access to digital tools is skills access, and it consists of 10 elements. The results of the survey for this indicator are shown in Table 4. The entire mean score was 3.88, which is similar to Very Evident in terms of descriptive equivalent.

According to the data acquired from the study's participants, the grade three teachers in Sta. The Maria East District has the necessary skills to use modern technologies.

The implication stated above backs up the research of Soomoro, et.al. (2020) that access has been achieved once one can use the medium and traverse the Internet. All current media literacy or digital skill researchers have discovered, nevertheless, those abilities like communication, content production, and information retrieval are more crucial for using digital media. To utilize content-related abilities, having medium-related skills is merely a necessary prerequisite. The degree of digital talent that people possess has not been the subject of much scientific study. Unfortunately, it is very challenging to define this precise level because the majority of digital abilities are learned by practice in specific social user settings rather than through formal computer education. There have only been a few skills estimates thus far. Several comprehensive surveys have shown stark disparities in skill levels between populations, including people in nations with widespread computer and internet access.

The conclusion based on research on the digital abilities of Soomoro, et.al. (2020) supports the finding that people of different ages and educational backgrounds perform significantly differently. The level of education is the most crucial variable. Highly educated individuals perform across the board effectively. **Access Usage.** The use of digital tools is the fourth sign of teachers' access, and it consists of 10 components. Table 5 displays the

survey findings for this indicator. The overall mean score was 3.98, which is roughly the same as the descriptive equivalent of Very Evident.

The study's participants' data reveal that the grade three instructors in Sta. There is no doubt that the Maria East District has access to modern technology.

The research of Kurmos (2021) is supported by the implication given above that usage is the main objective of access. This can be quantified in terms of usage duration and frequency, variety and quantity of applications, use of broadband or narrowband, and degree of activity or level of creativity. As digital media become more prevalent in daily life, usage time and the number of applications both rise along with social categories. While people with higher education were significantly more likely to use these media.

The use of digital tools is the fourth sign of teachers' access, and it consists of 10 components. Table 5 displays the survey findings for this indicator. The overall mean score was 3.98, which is roughly the same as the descriptive equivalent of Very Evident.

Moreover, the discovery of Bonfadelli (2002) backs up the finding that the education usage difference will presumably be the most enduring. A startling finding is that people with greater levels of education use digital media in a substantial way for capital-enhancing goals related to jobs, profession, and study, whereas others with lower levels of education use it for basic purposes like amusement, commerce, and communications. It has been observed that persons with higher levels of education utilize the Internet.

However, this negates the observation of Kalimullina (2021) that although there are many different digital learning tools, there have been problems with teachers using them because they lack the necessary technical skills or because some teachers have a bad attitude toward this new idea in education. That the author suggested, for teachers to succeed, it is necessary to create the right conditions and chances for them to acquire the necessary digital competence and learn about the culture of digital technology in learning environments.

The Academic Performance of the Grade 3 Learners

The status of grade III learners' academic performance in Sta. Maria East District was measured based on the proficiency level achieved by each class in the second quarter. The results in this indicator are shown in Table 2 indicating that generally, the proficiency level of all 17 schools included in the study is between 76.00 – 83.99 Percentage Score (Based on DepEd Order No. 8, s. 2015) which descriptor is Very Satisfactory and verbal description as the academic performance of the students is very satisfactory.

Based on the result of the class proficiency level in the second grading period, it is evident that all schools in Sta. Maria East District in the Key Stage 1 particularly in grade III classes are learning well in class with the different access to teaching and learning very agreeably.

The result supported the contention of Alberta Education 2016) that competencies are crucial for providing students with the knowledge, abilities, and attitudes they will need to successfully navigate their learning, living, and working journeys for students are the future's politicians, thinkers, creators, artists, and scientists. They will be challenged to find solutions for the problems of today while dreaming and creating a brand-new tomorrow.

Students put their competencies to use in novel or challenging circumstances and advance in them. By utilizing competencies, students can utilize and enhance their existing knowledge, cognitive style, and practical abilities. Students at school develop and apply competencies through the course material and learning experiences. This supported Garrett (2008) position that in a content-centered classroom, the teachers "cover" the subject, while the students "acquire" it. Educators and students collaborate in a learner-centered classroom to develop knowledge from the curriculum. Students employ a range of knowledge sources as a result, their prior knowledge is highlighted, and the creation of new knowledge is a social process. By asking questions and seeking out answers as they build their knowledge, students develop a desire to learn more.

Relationship between the Level of Teachers' E-skills and the Academic Performance of Learners

The status of teachers' access to digital technologies in Sta. Maria East District was measured with the following indicators: motivation access, physical access, skills access, and usage access.

Table 7 shows that Usage Access has the highest with a 3.9 mean percentage score which is described as Very Evident. It is followed by Motivation Access which has 3.92 which is described as Very Evident. Then, Skills Access which has a 3.88 mean percentage described as Very Evident. Lastly, Skills Access has a 3.84 mean percentage score which is described as Very Evident. Moreover, the overall mean percentage score is 81.91 which is described as Very Evident.

The results revealed that the teachers' access to digital technologies in terms of usage access, motivation access, skills access, and physical access is very evident. Though physical access logged a bit behind with the lowest mean percentage score but still it shows very event manifestation. The reason is that in school or work workplace, the teachers have access to digital technologies since most of the schools are now in Sta. Maria East District is already equipped with these digital technologies; except that a minority of the teachers, don't have access to these digital technologies at home.

On the other hand, Table 8 shows the overall class proficiency level of Sta. Maria East District which is 81.76 with the verbal description. the academic performance of the students was Very Satisfactory.

The result revealed that the learners of Sta. Maria East District performed very satisfactorily in academics based on the standards stipulated in DepEd Order No. 8, s. 2015.

Looking into the relationship between the teachers' e-skills and the learners' performance, it is resolved that there is a positive relationship between these two variables since, as the teachers' e-skills increase, the learners' academic performance also increases.

The impact of digital instruction posited by Kintu, et. al. is supported by this result stating that one big challenge is how users can successfully use the technology and ensure participants' commitment given the individual learner characteristics and encounters with technology. Users getting into difficulties with technology may result in abandoning learning and eventual failure of technological applications. As a result, learners developed negative attitudes toward blended learning and eventually would not complete their study in blended learning.

Kenney and Newcombe (2011) did their comparison to establish effectiveness because of grades and found that blended learning had a higher average score than the non-blended learning environment. Garrison and Kanuka (2004) examined the transformative potential of blended learning and reported an increase in course completion rates, improved retention, and increased student satisfaction.

4. MAJOR FINDINGS

The main purpose of the study is to determine the status of the Grade 3 teachers' e-skills in the practice of teaching and learning in Sta. Maria East District. Specifically, they answered the following questions:

1. What is the status of teachers' access to digital technologies at the following levels?
    - 1.1. motivational,
    - 1.2. physical,
    - 1.3. skills,
    - 1.4. usage level
2. What is the academic performance of the Grade 3 learners as a manifestation of teachers' e-skills in the practice of teaching and Learning?

3. Is there a significant relationship between the level of the Grade 3 teachers' e-skills and the academic performance of the Grade 3 learners?

This study hypothesized that there is no significant relationship between e-skills among Grade 3 teachers and Grade 3 learners' performance.

In this inquiry, the descriptive-correlational design was used. Given the nature of the descriptive-correlational technique, the researchers found it appropriate to present a picture of the current state of the digital gaps among Grade 3 teachers and Grade 3 learners' performance in Sta. Maria East District.

Based on the analysis of the data, these findings were drawn: The results revealed that the teachers' access to digital technologies in terms of usage access, motivation access, skills access, and physical access is very evident.

On the other hand, the result revealed that the learners of Sta. Maria East District performed very satisfactorily in academics based on the standards stipulated in DepEd Order No. 8, s. 2015.

It is resolved that there is a positive relationship between the teachers' e-skills and the learners' performance since, as the teachers' e-skills increase, the learners' academic performance also increases.

5. CONCLUSION

Based on the findings obtained in this study, the following conclusions are drawn:

1. The teachers' access to digital technologies in terms of motivation access is very evident.
2. The teachers' access to digital technologies in terms of usage and physical access is very evident.
3. The teachers' access to digital technologies in terms of skills access, and physical access is very evident.
4. The teachers' access to digital technologies in terms of usage access, is very evident.
5. The academic performance of the learners is very satisfactory based on the standards stipulated in DepEd Order No. 8, s. 2015.
6. There is a positive relationship between the teachers' e-skills and the learners' performance since, as the teachers' e-skills increase, the learners' academic performance also increases.

In light of the foregoing findings and conclusions of this study, the researcher formulated the following recommendations for consideration.

1. Opportunities for teachers' access to digital technologies in terms of motivation, physical, skills, and usage access may be developed and afforded to each teacher to maximize teaching and learning in concurrence with the demands of the new breed of learners.
2. Learning and development like in school-based training may be conducted for continuous improvement of teachers' pedagogical content knowledge in blended learning.
3. For better learners' achievement, there is a need to change the assessment system like putting weight on performance tasks rather than assessing the learners individually relying on oral questioning for the comprehension of the learners.
4. Similar inquiries may be conducted adding more variables like assessment and learning and development on teachers' e-skills and learners' performance.

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