

Access and utilization of educational technology and science performance of Junior Science High School students in the new normal

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Abstract. This study examines the relationship between access to and utilization of educational technology and the science performance of Junior High School students in the new normal educational setup. Utilizing a quantitative survey-correlational research design, data were gathered from 198 Grade 10 Science students at a public high school in Capiz during the school year 2022–2023. Results revealed that students had moderate access to and utilization of educational technology, hindered by limited device availability, poor internet connectivity, and restricted access to digital platforms. Despite these challenges, students achieved a "Very Satisfactory" level in science performance, highlighting the critical role of teacher training, curriculum integration, and infrastructure support in enhancing outcomes. This study underscores the need for equitable access to technology, comprehensive teacher training, and infrastructure development to bridge the digital divide and optimize the educational potential of technology in science education.

Keywords: Educational technology, Science, New normal, Technology utilization

Date Submitted: July 23, 2023

Date Accepted: October 15, 2023

Date Published: December 18, 2023

Suggested citation:

Detoga, L.D. (2023) Access and Utilization of Educational Technology and Science Performance of Junior Science High School Students in the New Normal. *Pantao: International Journal of the Humanities and Social Sciences*, 2 (2).

INTRODUCTION

The impact of the novel coronavirus 2019 (COVID-19) is far-reaching, reverberating through all walks of life. The pandemic has severely affected not only the healthcare and economy, but also the education of the different countries around the world. New norms were adopted to become pandemic-resilient as this health outbreak had gripped billions of people with fear and death for more than 2 years.

In the Philippines, the Department of Education has issued several directives that provided school administrators and teachers the bases on how to deal with COVID-19. These pronouncements included guidelines on the suspension of classes due to COVID-19, creation of Central Office Taskforce, adoption of videoconferencing, PUM and PUI monitoring, public service continuity plans, social distancing, workplace, home and travel guidelines for teachers, and fostering wellness (Department of Education, 2020). Furthermore, it exposed the lack of preparedness of the education sector, most especially the lack of access to technology or fast, reliable internet access can prevent students in rural areas and from disadvantaged families. Lack of access to technology or good internet connectivity is an obstacle to continued learning, especially for students from disadvantaged families.

There is no denying that access to educational technology plays a crucial role in shaping its use and impacting high school students' performance in science. In today's digital age, educational technology encompasses a wide range of tools, resources, and digital platforms that can enhance learning experiences and facilitate scientific exploration.

However, the mere availability of technology does not guarantee its effective utilization or positive outcomes in terms of student performance. Factors such as digital literacy, teacher training, and infrastructure also play significant roles in determining the impact of educational technology on science education.

The pandemic presented an opportunity for the Department of Education (DepEd) to transition the school system to something more resilient to disruptions and more prepared not only for the current outbreak but for the next pandemic as well. This requires a new thinking, a new way of seeing education. The “new normal” does not have a definite shape yet. What is emerging is a menu of flexible learning options that adapt to learners in diverse contexts rather than learners adjusting to the system. Considering the limitation on connectivity, the concept of flexible learning emerged as an option for online learning especially in higher institutions in the Philippines.

Various studies have already proved the effectiveness of integrating technological advancement in teaching and learning to an individual or student. Various technologies that have been developed and utilized concretely contribute to advancing and improving students' performances. In the field of education, the influence of technology is ever increasing as school districts and even state governments mandate its use more and more each year. Furthermore, the impact of educational technology on high school students' performance in science is also influenced by the availability of infrastructure and support systems. Schools need to have a reliable infrastructure that supports the use of educational technology, including a robust network, access to power sources, and technical support. Additionally, schools must have policies and guidelines in place to ensure responsible and safe use of technology, addressing concerns such as online safety, privacy, and digital citizenship. When schools have the necessary infrastructure and support systems in place, it creates an enabling environment for effective utilization of educational technology, fostering students' engagement and enhancing their performance in science.

Hence, access to educational technology is a critical factor in shaping its use and impacting high school students' performance in science. While access to technology resources is important, it is equally crucial to consider how technology is integrated into the curriculum, the level of teacher training and support, and the availability of infrastructure and support systems. When educational technology is effectively utilized, it can provide students with engaging learning experiences, foster their scientific knowledge and skills, and contribute to improved performance in science. Therefore, addressing the digital divide, providing teacher training and support, and ensuring infrastructure and support systems are essential to maximize the potential benefits of educational technology for high school students' science education.

Statement of the problem

This study aimed to determine the access and utilization of educational technology and science performance of Junior Science High School students in Maayon National High School in the New Normal. Specifically, the study sought to answer the following questions:

- 1) What is the level of access to educational technology of Junior High School students in the New Normal?
- 2) What is the level of utilization of educational technology among Junior High School students in the New Normal?
- 3) What is the level of science performance of Junior High School students in the District of Maayon in the New Normal?
- 4) Are there significant relationships among access and utilization of Educational Technology and science performance of Junior Science High School in the District of Maayon in the New Normal?

LITERATURE REVIEW

Access to Information Technology

The use of Information and Communication Technology (ICT) in teaching and learning has become very common these days. Access to information increases the awareness of students, help them in increasing thinking and creativity in learning tasks, provide quick access to subject material and engage them in adopting strategies which can help in maximising the quality of learning. The process of learning can become very rich if students have access to latest information on subjects, can analyse the information quickly by manipulating it on computers through graphical displays and experiment with the information to effectively communicate their results and conclusions using the technical tools. (Gorra & Bhati, 2016)

On the other hand, technology can also be used to distract students in the class room from their learning activity. Technical tools like laptops and mobile phones can distract students from their learning activity and cause disruption to class room activity, if not used properly. Mobile phones distract students because of problem of ringing during class room discussion, use in cheating during class room assessments, multi- tasking by students and use of camera in the class room which could lead to privacy issues. Similarly laptops and computers can be used for instant messaging and using Facebook, watching movies or videos not relevant to class room topics and distracting other students. (Gorra & Bhati, 2016)

Technological resources such as computers, laptops and mobile phones used in teaching and learning activities have both constructive and destructive effect on academic environment affecting both students and teachers. The use of technical and instructional innovations sets off a chain of actions and reactions within education system, some of which are intended and others unintended. Unintended effects of using technology in education accompany the adoption of technology without warning. These unintended consequences of use of technology in teaching and learning can cause disruption in class room, laboratories, and lecture halls and even outside the traditional classrooms. The study of these unintended consequences of use of technology in a class room setting is essential for teachers, instructors, education administrators and education planners. If the stakeholders in delivery and planning of education have proper understanding of intended and unintended consequences of use of technology in class room, they can develop strategies which can help them optimize use of technical resources and devise intervention programs in schools and colleges where needed. (Gorra & Bhati, 2016)

The education system has undergone a paradigm shift from where it used to stand years ago. In the olden days, students had to go to the library and open big books to find the information they needed. In the 20th century, one would find thousands of results for the same things they need—in just a fraction of a second. The technology has truly improved, and continues to evolve. (Gorra & Bhati, 2016)

Computers, laptops, smartphones, tablets—these devices have become a necessity in today's age. These are not merely for fun and leisure anymore. They are now being heavily used by our education sector. The power and importance of technology in education is evident now more than ever, as Filipino students need access to education even during crisis. (Gorra & Bhati, 2016)

Technology is so advanced, so much that it now drives business growth. Hence, companies maximize this to improve their performance, so they hire tech-savvy candidates who can contribute to their businesses. In line with this, school is a good training ground for future professionals. It can help these kids by integrating technology into their system through their materials, facilities, rooms, and even modules. On the other hand, kids

nowadays are digital natives. Using tech for their daily studies can help them more than it can drag them down. (Gorra & Bhati, 2016)

With the ongoing pandemic, one can see how important it is in the country. In fact, it has been tagged as the “silver lining of our education system” in a virtual round table called “Education During Trying Times” last October 2020. “We are in an era of technology and digitalization. Let us maximize all of these and continue to help each other and find solutions to the challenges being faced by the education sector,” said Dr. Ethel Agnes P. Valenzuela, SEAMEO secretariat director.

Technology bridges the gap between quarantine and teaching. During the second quarter of 2020, we can recall how our education sector carried out online classes. Many LGUs distributed mobile devices to students, teachers underwent training to maximize digital learning, and learning programs were added to our TV channels. In fact, the DepEd TV team aimed to produce 220 episodes weekly covering all subject areas by January 2021. Zoom has boomed not only here but also worldwide, being used as a primary tool for virtual classes. Smartphones have become essential more than just being a luxury. Digital tech during this time is a need for all. So, how vital is tech to education? Listed are some of the key benefits of tech both to students and teachers. Here are the benefits of educational technology both to students and teachers.

Utilization of Educational Technology

Technological resources such as computers, laptops and mobile phones used in teaching and learning activities have both constructive and destructive effect on academic environment affecting both students and teachers. The use of technical and instructional innovations sets off a chain of actions and reactions within education system, some of which are intended and others unintended. Unintended effects of using technology in education accompany the adoption of technology without warning (Nworie & Houghton, 2018). These unintended consequences of use of technology in teaching and learning can cause disruption in class room, laboratories, and lecture halls and even outside the traditional classrooms.

The study of these unintended consequences of use of technology in a class room setting is essential for teachers, instructors, education administrators and education planners. If the stakeholders in delivery and planning of education have proper understanding of intended and unintended consequences of use of technology in class room, they can develop strategies which can help them optimize use of technical resources and devise intervention programs in schools and colleges where needed. The purpose of this paper is to study the consequences of use of technology in class room within the Philippine context, specifically in the four state colleges and universities in Caraga Region. This study hopes to fill this gap and provide a context to policy makers in Philippines on which they can base their strategic direction and intervention in use of technology if necessary. The specific issue addressed in this paper is the nature of unintended consequences in the use of technology in the classroom. This paper is divided into following parts – next section describes the literature review, then methodology is given after that results are given and discussion are given followed by conclusions. (Gorra & Bhati, 2016).

Some of these studies argue about the effectiveness of e-learning in terms of satisfaction, motivation, enhancement of learning. For example, in the study on the effectiveness of e-learning for undergraduate students in health profession found that online learning does contribute to changes in learning, skills, attitudes and satisfaction and seems to be effective in all these attributes (George, et al., 2014) In their review of other studies, these authors found that 29% of studies showed higher knowledge gains, 40% showed greater skill acquisitions, 67% of studies show no difference in attitudes and 14% showed higher satisfaction with e-learning. The majority of studies related to high income countries.

Therefore, their results are generalizable to these countries only. Their application to low income countries like Philippines is limited. This study also does not address the question of unintended consequences of e-learning. (Gorra & Bhati, 2016; Nworie & Houghton, 2018).

Since the Philippines is a developing, it is relevant to examine some of the studies on e-learning in developing countries. A study on e-learning in developing countries presented a framework for developing e-learning programs in universities. The authors provided some guidelines on theoretical and practical experiences of e-learning with specific context of Iran, which is a developing country like Philippines. It was suggested that though e-learning can be very effective tool and efficient framework for learning in developing countries particularly in rural and remote area which are not easily accessible, yet lot needs to be done to make the technology easily acceptable in developing countries . He suggested further that well organised monitoring and control programs, support for students and lecturers in use of technology can help in improving the quality of education in developing countries. (Safaavi, 2018)

With particular reference to Philippines, the increasing prominence of the internet in the world community, the use of internet-based courses especially for advanced study where the student already has a decent grounding of the subject. This especially holds true for the study of English. According to Gamboa [6], e-learning is only applicable for student in Philippines, who knows very little English but is ashamed or embarrassed to study in a regular classroom. Although it is advisable for beginning students to study in a real classroom environment and where total immersion is still the most effective way to learn the basics of the language, online classes are becoming more of a logical choice for its anonymity. Furthermore, students can fit their studies into their schedules, and do not have to travel to find people fluent in English. These teachers can be brought directly into the student's home or office. While there will always be a place for "analog" classrooms, e-learning will increasingly become a prominent tool for those seeking to better their skills and increase their value on the world market. (Ghorra & Bhati, 2016)

Another study on Philippines education by Lazarro and Mandela (2014) focuses on the study of English as a language of communication in Philippines. They argue that Filipinos lack proficiency in English language and have therefore lost valuable opportunities in development of education because of lack of proficiency in English language. The lack of linguistic abilities in English could also hamper the use of technology in Philippines. This study is specific to Philippines but does not address the issue of use of technology in Filipino class rooms and resulting unintended consequences of use of technology in teaching and learning.

Performance in Science

The Department of Education (DepEd), mandated to ensure access to quality basic education for all Filipinos, is committed to engage in various national and international system assessments to guide its efforts to address the challenge of improving the quality of basic education. Towards this end, DepEd participated in the 2018 cycle of the Programme for International Student Assessment (PISA), a triennial international assessment administered to 15-year old learners, who are near the end of their compulsory basic education. Implemented by the Organisation for Economic Cooperation and Development (OECD), PISA specifically looks into the learners' ability to apply the knowledge they have gained in formal education to everyday situations. The PISA results can provide relevant insights on student performance and inform policy decisions of the Department. (Organisation for Economic Co-operation and Development, 2019)

For 2018, Reading Literacy was assessed as major domain, and Mathematical Literacy and Scientific Literacy of the students were assessed as minor domains. Global Competence

was also included as an innovative assessment. Filipino students attained an average score of 357 points in Scientific Literacy, which was significantly lower than the OECD average of 489 points. (Organisation for Economic Co-operation and Development, 2019) Female students obtained an average score of 359 points for Scientific Literacy, which was slightly higher but not significantly different from the average score of male students (355 points).

Students from private schools scored an average of 399 points in Scientific Literacy, which was significantly higher than that of public school students who averaged at 347 points. SHS students (439 points) performed significantly better than JHS students (356 points). (Organisation for Economic Co-operation and Development, 2019)

The National Capital Region (NCR) achieved the highest Scientific Literacy scores across all the administrative regions included in the study. Region 7 (Central Visayas) obtained the top average score for Scientific Literacy in the Visayas group of islands, while Region 11 (Southern Mindanao) had the highest in Mindanao. The average performance of students in urban areas for Scientific Literacy was 370 points, which was significantly greater than the average performance of those in rural areas (333 points). (Organisation for Economic Co-operation and Development, 2019)

The PISA 2018 results reflect the urgency of improving the quality of basic education in the Philippines. The Department will lead this national effort through “Sulong EduKalidad”, whereby it will implement aggressive reforms in four key areas: (1) Upskilling teachers and school leaders through a transformed professional development program; (2) Review and updating of curriculum; (3) Continuous improvement of the learning environment; and (4) Multi-stakeholder cooperation. The Philippines obtained an average Scientific Literacy score of 357 points in PISA 2018, significantly lower than the average score of OECD, 489 points. The mean score of Filipino students is within Proficiency Level 1a. Hence, an average Filipino 15-year-old student can use basic science knowledge to recognize or identify explanations of scientific phenomena. With additional guidance, they can do structured scientific inquiries with at most two variables. In comparison, a typical 15-year-old student from OECD countries at Proficiency Level 3 can draw upon moderately complex content knowledge to construct explanations of familiar phenomena. The Philippines fared significantly lower in Scientific Literacy than all the ASEAN countries that participated in PISA 2018. Nearly four out of five (77.97%) PISA eligible students in the Philippines achieved proficiency levels below Level 2. Specifically, 35% of Filipino students were classified as Proficiency Level 1a and another 35% as Proficiency Level 1b. This suggests that majority are able to select the best scientific explanation for given data in familiar personal, local and global contexts. They can identify simple patterns in data, recognize basic scientific terms and follow explicit instructions to carry out a scientific procedure (Organisation for Economic Co-operation and Development, 2019).

Furthermore, findings of the PISA revealed the disparities based on gender, school type, school level, region, and community type. Female students' average score of 359 points did not significantly differ from male students' 355 points, both falling within Proficiency Level 1a. Private school students outperformed their public school counterparts, with average scores of 399 and 347 points, respectively, both within Proficiency Level 1a. Senior High School (SHS) students scored higher (439 points) than Junior High School (JHS) students (356 points), indicating a higher level of scientific literacy. Regional variations were evident, with the National Capital Region (NCR) achieving the highest scores. Urban students also outperformed rural students, with average scores of 370 and 333 points, respectively. Challenges identified in Physics education include science investigatory projects, IT use, and English language proficiency. Proposed interventions aim to enhance student performance in Physics. (Ebora, 2016).

METHODOLOGY

Research design

This study employed a quantitative research approach, specifically utilizing a survey-correlational design. The design focused on exploring the relationship between access to and utilization of educational technology and the science performance of Junior High School students. This approach allowed for the collection and analysis of numerical data to determine patterns and relationships among the variables of interest.

Locale of the study and respondents

The study was conducted at a public national high school in the Province of Capiz. The respondents were 198 Junior High School science students enrolled in Grade 10 Science for the school year 2022–2023. The participants were selected using a random sampling method to ensure representation from the large student population in the school.

Research instruments

Data were collected through a researcher-made questionnaire that was validated by a panel of experts in science education research. The instrument underwent reliability testing to ensure its appropriateness and accuracy for gathering data on access to and utilization of educational technology as well as science performance.

Data analyses procedure

Once the questionnaires were completed, the responses were encoded and processed using the Statistical Package for Social Sciences (SPSS) software. The statistical methods used for analysis included the computation of mean values, analysis of variance (ANOVA), and Pearson's correlation to interpret the relationships between variables effectively. This approach provided robust insights into the study's objectives and supported the investigation of significant relationships among the identified factors.

RESULTS AND DISCUSSION

Level of access to educational technology of Junior High School students in the New Normal

Based on the findings of this study, it was found that the respondents had moderate access to educational technology. This findings was derived based on the mean score of 3.30 (S.D. 0.65), which indicated that the respondents possessed moderate access to educational technology.

This indicates that the learners have limited access to computers at home and in school. They also have limited access to laptops or smartphone. Not too many of them also own a smart TV or a tablet at home. Likewise, there was limited availability of projector and screen in the school. They also had problem in terms of internet connectivity both at home and in school. Similarly, they faced constraints in downloading videoconferencing tools like Zoom or Google Meet, as well as other online technology platforms, like Google classroom, Canvas, Kahoot, Good Drive or even the DepEd Learning Portal. Similarly they have problems in accessing ebooks and ejournal and even their email address.

Findings imply that providing access to educational technology for Junior High School students in the New Normal has several implications. It is true that it provides students with access to a wide range of learning resources beyond what is available in traditional classrooms. It allows students to explore different subjects, access interactive multimedia

content, and engage in self-paced learning. This can enhance their understanding and knowledge in various subjects.

Similarly, it promotes educational technology, which enables students to learn at their own pace and according to their own schedule. They can access educational materials anytime and anywhere, which is especially beneficial in the New Normal where remote or blended learning models are common. Students have the flexibility to review content, revisit lessons, and engage in personalized learning experiences.

Limited access to educational learning tools also imply that this could exacerbate existing educational inequalities if not properly addressed. Disparities in internet access, device availability, and digital literacy skills can create a digital divide, leaving some students at a disadvantage. Students without access may fall behind their peers who have access to online resources, widening the achievement gap. This can perpetuate socioeconomic disparities and hinder social mobility. It is crucial for educational institutions and policymakers to ensure equitable access to technology and provide necessary support to bridge these gaps.

In line with these findings, online technology enhances engagement and motivation. As George, et al. (2014) explained, many educational technologies incorporate gamification elements, interactive quizzes, and multimedia content that can make learning more engaging and enjoyable for students. This can help maintain their motivation and interest in the learning process, leading to improved academic performance.

The findings of this study are also supported by Harandi (2015), who explained that access to online technology improves digital literacy and 21st-century skills. Access to educational technology equips students with valuable digital literacy skills necessary for their future success. They learn how to navigate online platforms, use digital tools for research and collaboration, and critically evaluate online information. These skills are increasingly important in today's digital age and prepare students for higher education and the workforce.

Gorra & Bhati (2016) likewise explained that the use of Information and Communication Technology (ICT) in teaching and learning has become very common these days. Access to information increases the awareness of students, help them in increasing thinking and creativity in learning tasks, provide quick access to subject material and engage them in adopting strategies which can help in maximising the quality of learning. The process of learning can become very rich if students have access to latest information on subjects, can analyse the information quickly by manipulating it on computers through graphical displays and experiment with the information to effectively communicate their results and conclusions using the technical tools.

Studies also find decreased engagement and motivation among learners. Online learning often incorporates interactive and engaging elements, such as multimedia content and gamification. Without access to these tools, individuals may experience reduced engagement and motivation in their learning journey, resulting in decreased learning outcomes (Safaavi, 2019).

On the other hand, Gorra & Bhati (2016) warned that technology can also be used to distract students in the class room from their learning activity. Technical tools like laptops and mobile phones can distract students from their learning activity and cause disruption to class room activity, if not used properly. Mobile phones distract students because of problem of ringing during class room discussion, use in cheating during class room assessments, multi- tasking by students and use of camera in the class room which could lead to privacy issues. Similarly laptops and computers can be used for instant messaging and using Facebook, watching movies or videos not relevant to class room topics and distracting other students.

Furthermore, Child Hope Philippines (2021) explained that educational technology can be used to identify and address learning gaps more effectively. Teachers can utilize data analytics and assessment tools to track students' progress, identify areas where they may be struggling, and provide targeted interventions. This individualized approach helps ensure that students receive the support they need to succeed academically. Furthermore, it promotes independent learning and self-directedness: With access to educational technology, students have the opportunity to take more ownership of their learning. They can engage in self-directed research, pursue areas of interest, and develop critical thinking skills. This fosters independence and prepares students to become lifelong learners.

Level of utilization of educational technology by Junior High School students in the New Normal

A mean score of 2.84 was computed (SD 0.64), indicating that the junior high school science students only had moderate level of utilization. This indicates that the respondents had limited opportunities to use computers at home or in school. Not too many also owned laptops or smartphones for their studies. It is also possible that they could seldom watch educational TV shows, like DepEd TV on our family's television set. Likewise, their use tablet for studying and other school related works is limited. Similarly, the use of projector and screen to show lessons is less frequent and the internet connectivity at home or in school is not that much available.

The implication of the use of educational technology facilities by Junior High School students in the New Normal has several impacts. For one, it improves access to information. ICT facilities such as computers, tablets, and the internet provide students with access to a vast amount of information. Students can conduct online research, access educational websites, and explore digital libraries. This widens their knowledge base and allows them to delve deeper into various subjects.

Furthermore, the use of ICT facilities prepares Junior High School students for the demands of the digital age. They develop essential skills such as critical thinking, problem-solving, creativity, and digital literacy, which are increasingly important in the modern workforce. By gaining familiarity with ICT tools and platforms early on, students are better equipped to navigate the digital landscape in higher education and their future careers.

Findings of this study are supported by various prior studies. Thacket, et al. (2018), for instance, wrote that enhancing learning experiences is also possible with the use of educational technology. These facilities enable interactive and multimedia learning experiences. Students can engage with educational software, simulations, and virtual labs that make complex concepts more understandable and engaging. This hands-on approach fosters active learning and deeper comprehension.

Educational technology tools also facilitate collaboration and communication among students, Noessgard & Orngreen (2015) elaborated. Students can work on group projects, share ideas, and collaborate on assignments using online tools and platforms. This encourages teamwork, develops communication skills, and prepares students for future collaborative work environments.

As with the experience during the COVID-19 lockdowns bridging geographical barriers: ICT facilities help overcome geographical barriers by enabling remote learning. Students can access educational resources, interact with teachers and peers, and participate in virtual classrooms regardless of their physical location. This is particularly relevant in situations where in-person attendance is not feasible, such as during the COVID-19 pandemic. (Child Hope Philippines, 2021)

Nworie & Houghton (2018) also found that using e-learning tools help focus on engagement and motivation as necessary factors for knowledge gain and learning transfer, relation between learning outcomes and behaviour. They identify resources and support as essential factors for using e-learning initiatives. Learner characteristics such as age, previous online experience, gender, interaction with instructors, use of technology, online communication were identifies as contributing factors to improvement to learning. Their study is primarily based abstracts of papers reviewed and could have resulted in different conclusions of study if the study was based on full papers. These authors support qualitative research in addition to quantitative research for understanding the results of e-learning. Their study however does not address the issue of unintended consequences of e-learning (Nworie & Houghton, 2018).

Level of science performance of Junior High School students in the New Normal

Science performance of Junior High School students obtained a rating of 89.09, which is translated to Very Satisfactory. However, this indicates that the junior high school teachers and students should continue to strive further to improve their science performance.

There are various implications of science performance among high school students and these present have significant consequences. For one, in terms of academic achievement, Science performance is often used as an indicator of academic success. Strong performance in science indicates a solid understanding of scientific principles and concepts. It can open doors to further educational opportunities, including admission to prestigious universities or science-related programs.

Looking into higher education opportunities, science performance is a crucial factor in college admissions, particularly for programs in science-related disciplines. High-scoring students may have a better chance of gaining acceptance into competitive science programs, scholarships, or research opportunities. Strong science performance can also pave the way for pursuing advanced degrees in scientific fields.

Furthermore, scientific literacy is affected by science performance reflects students' scientific literacy, which is essential for participating effectively in modern society. High science performance indicates a strong foundation in scientific knowledge and reasoning, empowering students to engage with scientific topics throughout their lives.

Findings of this study are supported by the findings of Lazarro & Medalla (2014) who expounded that high science performance among high school students has significant implications for both individuals and society as a whole. Individually, strong performance in science opens doors to various academic and career opportunities in STEM fields. It equips students with the necessary knowledge, skills, and critical thinking abilities to pursue advanced scientific studies and excel in scientific professions. Furthermore, high science performance promotes scientific literacy and empowers individuals to make informed choices regarding their health, environment, and technology, leading to improved well-being and sustainable development.

CONCLUSION AND RECOMMENDATIONS

The findings reveal that the respondents exhibited moderate access to educational technology, facing various limitations in terms of device availability, internet connectivity, and access to digital resources and platforms. These constraints may hinder their ability to fully engage with digital learning tools and resources, potentially impacting their educational experiences and opportunities. Addressing these access gaps could lead to educational stakeholders to

create a more inclusive and empowering learning environment, enabling students to fully leverage the potential of educational technology for academic success and skill development.

The findings also reflect the limited opportunities for Junior High School students to access and utilize educational technology. The lack of access poses significant challenges for students in acquiring and utilizing digital resources for their studies. However, it is evident that the use of educational technology facilities, if adequately provided and accessible, can greatly improve students' access to information. The availability of ICT facilities enables students to conduct online research, access educational websites, and explore digital libraries, expanding their knowledge base and facilitating a deeper understanding of various subjects.

The researcher, likewise, highlighted the multifaceted nature of science performance and the need for a holistic approach to science education. While access to educational technology is an important aspect, it is not the sole determinant of science performance among high school students. The results indicate that other factors, such as the quality of science education, teaching methods, and student motivation, play significant roles in shaping science outcomes.

As such, school administrators may focus on enhancing and expanding the technological resources available to teachers and students. This could include providing additional devices (laptops, computers, ICT facilities), improving internet connectivity, and increasing access to relevant educational software and platforms (ebooks, videos, open access tools). The management of the Department of Education may also allocate funds for training programs for educators and students to effectively utilize these resources would be beneficial. By prioritizing the advancement of educational technology infrastructure, school administrators can empower individuals to fully leverage its potential for enriched learning experiences and improved educational outcomes. Improving internet connectivity is another vital aspect to consider by the Schools Division. Reliable and high-speed internet access is essential for effective use of educational technology.

It is also a big help if the school heads and teachers could tap the support of the parents and community, as well as, non-government organizations to acquire educational tools. Teachers may also access and download free electronic resources, such as digital libraries, open educational resources, and online learning platforms so that they can have online and e-resources inside their class.

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