

WWJMRD2022; 8(12):127-134 www.wwjmrd.com

International Journal Peer Reviewed Journal Refereed Journal Indexed Journal Impact Factor SJIF 2017: 5.182 2018: 5.51, (ISI) 2020-2021: 1.361 E-ISSN: 2454-6615

Angelie P. Asignacion Department of Education, Philippine Normal University-Manila, Philippines.

Arlyne C. Marasigan Philippine Normal University-Manila, Philippines.

Correspondence: Angelie P. Asignacion Department of Education, Philippine Normal University-Manila, Philippines.

Students' Perceptions of Teleskwela as a Learning Platform in the Context of COVID 19 Pandemic

Angelie P. Asignacion, Arlyne C. Marasigan

Abstract

Introduction-Educational institutions worldwide were affected by the COVID-19 pandemic. Many schools shifted education to online platforms to continue teaching and learning. UNESCO (2020) mandated the different learning modalities, including TV-based learning, to clarify this issue brought about by the pandemic.

Purpose-This study explores the pedagogical perceptions and experiences of the grade 12 students on Teleskwela as an educational Television (TV) program at a local network called Central Luzon Television 36 to serve Kapampangan students and teachers during the time of the COVID-19 pandemic.

Methodology-This study is an exploratory research design using a validated semi-interview questionnaire with in-depth interviews with twenty SHS students, and document analysis. Thematic analyses were used in analyzing the data.

Findings- The result shows that students varied perceptions such as they perceived Teleskwela as (1) a teachers and learners-friendly platform, (2) promotes transformative learning experiences through the use of media and technology, and (3) offers a quick guide to understanding the critical science concept. However, there are several challenges that students and teachers are faced with: (1) the length of each episode and module (2) the planning and scheduling of Teleskwela episodes (3) unstable internet connection (4) unfavorable learning environment at home for many students.

Conclusion- Based on the result of this study, it is concluded that Teleskwela is a good alternative learning material and platform because it is a friendly platform for the learners, motivates students to learn, and offers a quick guide to understanding science concepts, However, some challenges need to be addressed in order to achieve the effectiveness even though it is evident that Teleskwela serves as a good teaching and learning platform to help the students easily understand science concepts during this time of the pandemic.

Recommendation- The result of the study recommended that Teleskwela needs to be reviewed in terms of length of episode and module and provide more contextualized examples so that students could relate more to it.

Keywords: COVID-19, Teleskwela, Inclusive Education, TV-based learning.

Introduction

The COVID-19 pandemic affected educational institutions worldwide to shift to online platforms to keep academic activities moving. However, for developing countries, like the Philippines, the question of educational effectiveness and preparedness in terms of e-learning is still a challenge. The transition of teaching and learning to an online platform is not easy due to several reasons, such as the availability of adequate facilities and infrastructure, proper training in the use of ICT-based teaching learning resources, and poor internet connection to name a few.

Through the adoption of the Basic Education Learning Continuity Plan (BELCP), the Department of Education (DepEd) streamlined the essential requirements of new normal education during the time of the pandemic. It covers the use of multiple learning delivery modalities (LDM) such as blended or distance learning for learners, the K to12 Curriculum to the most "essential" learning competencies or MELCs, and the required school health standards.

Despite the effort of the DepEd to provide necessary operational directives across all schools

through BELCP, the shift to remote learning has brought extra difficulties for learners who have special learning needs and disabilities, such as lack of access to educational supports, difficulty interacting with technology, and personalized learning intervention. With this, educators have swiftly modified their methods in response to these difficulties and created innovative strategies for delivering quality and inclusive education for all learners. COVID-19 has upended education systems globally, posing unforeseen difficulties in delivering quality education for all. Schools quickly adapted to the COVID-19 lockdown and shifted to other modalities of teaching and learning.

One of the innovative strategies for delivering inclusive education is having an educational TV program that caters to the learning needs of the students. Some parts of the education sector look up to having TV-based learning since most of the students have their television at home. Students can learn at home using their television at home despite the challenges brought by the distance learning caused due to COVID-19 pandemic. TV-based learning is one of the best alternatives this time of pandemic and even post-pandemic because it is equitable and inclusive that promotes lifelong learning opportunities for all students aiming for Sustainable Development Goal for education no.4, achieving quality education.

Quality science education this time of the pandemic

Quality of science education becomes a big question in this time of pandemic due to lack of resources, involvement, and connectivity, here are some of the reviews of related literature about quality education.

A study conducted by Binar Kurnia Prahani, et al. (2021) stated that the Online Scientific Creativity Learning (OSCL) can serve as a substitute for students' scientific creativity in science education since it promotes responsibility and the scientific method abilities that are often intensified in the students' learning phases. In addition, Ray and Srivastava (2020) found that the effectiveness of online resources and virtual classes as a potential substitute for learning science from home might be an alternative way. It has been also established that the employment of a blended face-to-face and remote approach to the design of training sessions is successful for senior course students (Makarovskikh, 2021).

Meanwhile, in the study conducted by Atieh (2020), it was discovered that students' perceptions of remote learning during the Coronavirus pandemic are moderate and favorable, including test and evaluation items, collaboration social influence items, and educational process items. Furthermore, Gordy et al. (2021) stated that teachers reported feeling more comfortable using technology for online instruction in part as a result of their involvement in the Science Teaching Excites Medical Interest (STEMI) program. Despite the unanticipated difficulties, the COVID-19 pandemic situation gave instructors the chance to use new technology in the classroom and anticipate the need for technology integration to be ready for unexpected scenarios in the future. Moreover, other findings of Elnikova (2020) discovered that Belgorod higher education institutions were able to quickly plan the delivery of curriculum remotely and effectively complete the academic year by depending on the already established distance learning foundation.

Furthermore, the study of Nsengimana (2021) identified online resources, communication platforms, and ICT

infrastructures and software as opportunities for science online learning. However, it also highlighted a number of difficulties in learning mathematics and science, such as a lack of open resources, insufficient support for structured exercises, lack of practical activities, and insufficient access to online resources, despite learners' willingness to participate in online learning classes.

Also, one consideration that may affect students' learning is the teacher factor. Solis-Foronda and Marasigan (2021) found that one main factor that may affect students' loss of interest to learn is the teacher-based adversities, students who experience teachers' little dedication to teach affects negatively their learning performance in science.

Quality education in this time of the COVID pandemic must be examined. A study conducted by Basilaia and Kvavadze (2020) clarifies that the transition to a newnormal set-up must examine the effectiveness of online learning in terms of its outcome and delivery quality to the students.

Role of technology in Science teaching and learning in the context of the COVID-19 Pandemic

To settle the challenges brought by the COVID-19 pandemic in every educational institution, there is a need to examine the use of effective online learning. To clarify this issue brought about by the pandemic, UNESCO mandated different learning modalities, such as TV broadcasts, radio broadcasts, video lectures, online channels, and other platforms, could be maximized during this time pandemic (UNESCO, 2020). Furthermore, the Department of Education stressed that teachers could formulate numerous modalities to make online learning a viable option in this modern learning setting (DepEd, 2020).

However, Adnan (2020) revealed that in underdeveloped countries like Pakistan, where the vast majority of students cannot access the internet due to financial and technological barriers, online learning could not yield learning positive desired results. Thus, the implementation of online learning would pose a big problem to the students due to having a poor internet connection.

Chan, Marasigan, and Santander (2021) state that to overcome limited internet access and a lack of learning resources, supplemental materials, and video lessons were created. Toquero (2020) added that adapting to the modern instructional format requires teacher training in online education, distance learning, and blended learning. Furthermore, Tria (2020) points out that there is a need to improve policy in instruction delivery, allowing for online education platforms.

Although the implementation of online learning seems problematic, various study shows the effect of having video instruction in asynchronous learning activities when some students have trouble with internet connection during their synchronous classes. The study by Mishra, Gupta & Shree (2020) found that 50% of teachers used YouTube to record their lectures as part of their web-based instruction, while 28% of students used YouTube to view the recorded videos and presentations from various sources.

Meanwhile, the study conducted by Navarro, Garcia & Conesa (2020) states that students will benefit from videos that will help them improve their results and increase their chances of passing the physics class. Navarro, Garcia, and Conesa (2021) conducted another study to determine the

results through a qualitative lens and discovered that, although students agree that videos cannot replace text documents, they consider videos to be the most important resource. Another study shows that student self-regulation and interest were enhanced by having a video learning environment, thus improving students' learning performance (Delen, Liew, & Willson, 2014).

Moreover, other findings indicate that students have positive perceptions of video-based learning (Pal & Patra, 2020). In addition, students who watch video-recorded lectures have a significant improvement in their grades and understanding, and have ease in learning (Brecht, 2012). Bhadani et al. (2017) added that in establishing a blended learning environment, the learners find videos effective in improving their perceptions of learning as compared to traditional lectures. This implies students are active and self-directed when participating in online learning with video as supplementary material.

Furthermore, a study conducted by Muthuprasada, Aiswarya, Aditya, & Jha (2021) mentioned that although students find it challenging to have online learning, 70 % of them wanted to use their smartphones for online learning activities. Furthermore, Reeves, Caglayan, and Torr (2017) added that although many students saw video blogging as a useful learning activity, they also found a number of obstacles that hindered its effectiveness. While online learning offers many notable benefits for the facilitation of performance-based classes, it must be carefully implemented as part of a larger instructional strategy in order to optimize the potential benefits for student learning and engagement.

TV educational channel for quality education

Television uses now as a source of learning. There is a channel for educational purposes, this becomes useful learning for many students. Students can learn anytime using their television at home.

In some countries, to solve the issue of having a poor internet connection, they utilize some TV channels to deliver quality education to learners who do not have gadgets and internet connections for online learning. In Jakarta Indonesia, the government collaborates with TVRI, the state-owned television broadcaster, to help students learn at home during the pandemic in areas where internet access is spotty (Beritasatu, 2020). In addition, teachers (34%) expressed a strong desire to use modern technological tools for online teachings, such as Zonet Cable TV/ Swayam Prabha educational DTH channels (11%) but students (27%) showed a slightly higher level of interest in using this interactive tool for online learning (Mishra, Gupta, & Shree, 2020). However, students are not often using multimedia media, even though they have access to online and television-based learning. A study found out by just 17 percent of Bangladeshi students have watched televised lessons, even though 39 percent of students have access to the Sangsad educational television channel. (Biswas et al, 2020), one main reason is that the learners spend most of their time on household chores and less time studying after school closures. Thus, there is a need to investigate the usefulness of TV based on students learning.

Television-based pedagogical approaches

A. Philippine educational Televisions programs

In the Philippines, the Department of Education's (DepEd) primary television-based instruction initiative is called DepEd TV aired on 15 television, cable, and radio stations throughout the country (DepEd, 2021). There are also other national educational TV programs and knowledge channels like Aha!, Matanglawin, Ibilib, and Born to be wild, Batibot, Sineskwela that students could watch to be updated with current science events and to connect these concepts with their studies. Aha! is a GMA Network educational television program hosted that is broadcast in the Philippines. It is informative n different learning areas where students can get additional information about the science around them. *Matanglawin* is a weekly science and environmental education program tackling numerous subjects. It provides interesting trivia and facts that may add to the learning in science subjects. IBilib is aired on GMA Network, like Japan's science television program Wonders of Horus, the program presents scientific experiments as well as facts and speculations about commonplace occurrences. IBilib scientific experiments help the learner how to conduct the experiment at home and learn from it. Born to Be Wild is a Philippine travel documentary television program aired on GMA Network. Born to Be Wild includes articles about the environment and wildlife, as well as its hosts' weekly excursions to the nation's frontiers, helping learners to be more aware of the science of the ecosystem. Popularly known as "Batibot," the Sesame Street Filipino version is a hit in the Philippines. It is a story telling in the early morning potrayed by Kuya Bodjie, KoKo, Kiko Matsing, Pong Pagong, and Ningning. This timeless children's educational show made up the 90's childhood meaningful by learning science, math, reading, values, and arts at home. Sineskwela, on the other hand, significantly influenced the youth of the 90s generation. It is entertaining to learn and discover more about science through the major characters, known as Anatom, Agatom, Ate Winnie, Kulitsap, Palikpik, Ugatpuno, and Kuya Bok. Sineskwela made science learning easier and more entertaining.

B. Teleskwela as a learning platform

In the province of Pampanga, they created a TV program called Super K Teleskwela. Super K Teleskwela is an educational tv program at a local television network called CLTV 36 to serve Kapampangan students from kindergarten to senior high school. Teleskwela TV program is an implementation of alternative delivery learning modalities that are being carried out during the COVID-19 pandemic, under the distance learning setting. Each K-12 level is given a daily 45-minute time window for the Teleskwela program, which covers the K–12 curriculum. In grade 12 Senior High School, it covers the lesson in Physical Science, UCSP, Oral communication, HOPE, Filipino sa Piling Larang, and Personal Development. Teleskwela is designed to provide supplementary learning materials aligned to the learning modules prepared by the chosen teacher-writers in Pampanga as part of its TV-based distance learning program. This TV program covers the entire learning process as if it is conducted in a classroom set-up. Teleskwela makes science teaching and learning easier as it discusses the content of the self-learning modules.

The goal of this study is to explore the pedagogical perceptions and experiences of the grade 12 students and teachers on Teleskwela as an educational Television (TV)

program and the issues and challenges the students have on Teleskwela in the time of the COVID-19 pandemic.

Theoretical Framework

The theoretical framework used in this study is Technological Pedagogical Content Knowledge (TPACK). Professional and research development activities significantly rely on TPACK, which has emerged as one of the most influential theories addressing ed tech integration. The 2006 TPACK framework developed by Matthew J. Koehler and Punya Mishra, which emphasizes pedagogical (PK), content knowledge (CK), knowledge and technological knowledge (TK), provides a useful solution to many of the challenges that educators encounter when integrating educational technology (ed-tech) into their classrooms. TPACK framework is important to improve students' learning experiences; technology must both communicate the content and complement the pedagogy.



Fig. 1: Technological Pedagogical Content Knowledge (TPACK).

Punya Mishra and Matthew J. Koehler (2006)

The TPACK framework describes how content (what is being imparted), pedagogy (how the instructor imparts that content), and technology (how technology was being utilized) must form the basis for any successful tech integration by discriminating between these three forms of knowledge.

In the Teleskwela platform, television was being utilized to promote transformative learning experiences through the use of media and technology and that offers a quick guide to understanding the critical science concept. The content was being taught by the teacher presenter who has a broader breadth of knowledge of the science content. Then, the teacher presenter imparts the content in a way that students could easily relate to it. Teachers present contextualized examples so that students can construct new learning based on their learning experience.

Teleskwela is a teacher and learners-friendly platform that follows the arrangement of the TPACK framework promoting the integration of technology in science learning which offers a quick guide to understanding the critical science concept.

Methodology

This study is exploratory research under a qualitative analysis design to explore the perception, issues, and challenges of the students on Teleskwela as learning material in the time of COVID-19 pandemic. The limited scope of prior studies on Teleswela as a learning material made this study exploratory research. Exploratory research needs to approach phenomena with a qualitative perspective (Samouel, 2003). The main instrument in conducting this study was a prepared and validated questionnaire with 10 open-ended questions. A panel of experts composed of three Doctors of Education reviewed the questionnaire to ensure the face validity and content of questionnaire. The panel's suggestions the were implemented, and the five open-ended questions in the questionnaire were finalized as a result. The questionnaire was answered by the 20 students to determine their perceptions of Teleskwela as a learning material.

In this qualitative study, the purposive sampling technique was used. The study was conducted among 20 grade 12 students from Senior High School in Apalit (Stand Alone 1) San Vicente, Apalit, Pampanga. The profile of interviewed 20 grade 12 Senior High School students is shown in Table 1.

Table 1: Profile of SHS students.

SHS students	Gender	Total Student Population
Grade 12	Female	10
Grade 12	Male	10

The permission was asked first from the school principal and an informed assent form from the parents of the students was also provided. The participants were properly informed about the implementation of the study. Permission was received from the parents and participants to ensure the ethical consideration of this study. It was noted that participating students were not expected to answer all the prepared questions or complete the questionnaires. Also, the participants' responses were kept private.

The interview was conducted by the researchers through messenger or google forms modality. Responses from the participants were recorded and transcribed accordingly. For the students to not be hesitant in answering the prepared questionnaire, questions were translated into Filipino during the interview.

After the individual interview, there was a need to conduct a Focused Group Discussion (FGD), to have the follow-up questions and get the main point of the participants responses. FGD was also designed to ensure the consistency and validity of student's responses. Thematic analyses were used in analyzing and interpreting the qualitative data gathered through in-depth interviews. Thematic analysis was used to generate themes on students' best learning experiences and challenges. The data gathered from the thematic analysis were transcribed and coded accordingly to get the main point of the participants. Significant statements which consist of both anchors (words and phrases) and specific experiences were identified and presented.

Results and Discussion

1. Teleskwela as teachers and learners-friendly platform Most of the students perceive Teleskwela as a teaching and learning material. Students watched Teleskwela as a learning material to help them understand science concepts and can easily answer their modules.

The participants were asked how they would describe their experiences of watching Teleskwela. Here are some of the responses:

Lessons are better explained compared to just giving a module (G12:F).

Also, they perceive Teleskwela as a teaching material as they are watching and listening attentively to the teacherpresenter so that they can do the activities in the selflearning modules.

When the students were asked about their favorite Teleskwela learning experiences, here are some of the responses:

My favorite Teleskwela learning is that they teach subjects and lessons that we can't understand, which helps us to answer our self-learning module faster (G12:F).

The participant's responses coincide with the study of Pal& Patra (2020) students have positive perceptions on having video-based learning.

When I watched the Teleskwela, I was happy because it makes my work in answering modules easier, because someone is teaching me, the lessons become easier and more understandable (G12:F).

You will learn something by watching Teleskwela and it will not be difficult for me to answer the self-learning module if I am watching Teleskwela (G12:M).

As mentioned in the study, students who watch videorecorded lectures have a significant improvement in their understanding and feel at ease while learning (Brecht, 2012). Teleswela is a friendly platform for students because by watching Teleskwela, students are learning from it.

2. Teleskwela as Transformative Learning Experiences through Media and Technology

Most of the participants also viewed Teleskwela as a transformative learning experience through media and technology. Most of the students used their television to watch Teleskwela and learn new concepts in the comfort of their homes.

It's easier for us because it can be watched on our TV while at home, and it's easier for me to follow and understand when I watch the lesson on TV than in Self Learning (G12:M).

They also used their gadgets such as cellphones and laptops and connect them to the internet to view the replay video recording of Teleskwela.

I'm glad when I am watching the video recorded Teleskwela on youtube using my cellphone because I can watch the lessons on youtube again when I forget some science concepts (G12: F).

The students' responses agree with the study of Bhadani et al. (2017) that in establishing a blended learning environment, the learners find videos effective in improving their perceptions of learning as compared to traditional lectures.

3. Teleskwela module offers a quick guide to understanding the critical science concept.

Most of the student's best learning experiences in watching Teleskwela is that it helps them to understand the lesson in modules easily. Such as in learning Physical Science, Teleskwela helps them to understand the critical concepts in Science quickly. They manage to do the experiments written in self-learning through the help of watching Teleskwela.

The participants were asked about their most memorable Teleskwela learning experiences. Here are some of the responses:

When I have difficulty in the subject of Physical Science, I watch Teleskwela because it is a big help for me to better understand the lessons (G12: F).

"When I tried to do the PhySci experiment and it worked when I watch Teleskwela (G12:M).

My favorite Teleskwela learning is that they teach subjects and lessons that we can't

understand in the self-learning modules, it makes our answering on self-learning modules faster because of that (G12: F).

The participant responses conformed with the study of Navarro, Garcia & Conesa (2020), who state that students will benefit from videos that will help them improve their results and increase their chances of passing the physics class. As Teleskwela is designed to provide supplementary learning materials aligned to the learning modules prepared by the chosen teacher-writers in Pampanga as part of its TV-based distance learning program to enhance students' performance.

Best Learning Experiences of the Students on Teleskwela These are the most memorable experiences of the SHS students on watching Teleskwela as learning material.

(1) Students are motivated to learn

Some participants felt excited and motivated while learning at home despite the uneven self-learning modules brought by the pandemic.

When I watched the Teleskwela I was happy because it makes my answering modules easier because someone is teaching me to make the lessons easier to understand (G12:M).

My favorite experience here in watching Teleskwela is that it is very easy to learn because they clearly teach the lesson and you are just at home(G12:F).

The Teleskwela as supplementary materials helps learners feel excited while learning at home, motivating them to quickly answers their self-learning module. The study of Delen, Liew, & Willson (2014) shows that student selfregulation and interest were enhanced by having a video learning environment, thus improving student's learning performance.

(2) Teleskwela as a source of information

The participants added that Teleskwela provides additional information that is not available in provided modules and online materials. The participants were asked about one of their favorite Teleskwela learning experiences.

My favorite experience is you will learn a lot from watching Teleskwela, that is not available online or in the module(G12:M).

Clearly, students who watch video-recorded lectures significantly improve their grades, understanding, and ease of learning (Brecht, 2012).

They also want the idea that they can replay the recorded video of Teleskwela on Facebook and YouTube whenever they want it.

We watch Teleskweka over and over again to fully understand the lesson (G12: F).

Thus, uploading the recorded video of Teleskwela on YouTube and Facebook has excellent

benefits. Mishra, Gupta & Shree (2020) stated that most teachers used YouTube to record their lectures as part of

their web-based instruction, while some students used YouTube to view the recorded videos and presentations from various sources.

Issues and Challenges of the Students on Teleskwela

These are the issues and challenges experienced by the SHS students while watching Teleskwela.

(1) The length of each episode and module

Most of the students' issues while watching Teleskwela is the fast run time of the Teleskwela episodes. Teleskwela episodes run for 25 minutes covering all the activities in one self-learning module. Thus, most of the students rant on the teacher-discussants' fast discussion on the Teleskwela. They also want more examples of the lesson so that they could relate to it.

When the participants were asked what problems and difficulties they face while watching Teleskwela, here are some of the responses:

Maybe, for me, the problem that I face is I don't get what they are saying right away because it's just a video and the teacher-presenters are quick to speak and I'm not a very good learner at what I'm being taught. Also, there are limited examples of the lessons (G12:F).

It conforms with the study of Tria (2020) which points out that there is a need to improve policy in instruction delivery, allowing for online education platforms.

(2) The planning and scheduling of Teleskwela episodes

Another issue faced by some learners is that they cannot follow the schedule of Teleskwela on television.

Sometimes I'm late to watch Teleskwela because the time is different (G12:M).

Sometimes I don't catch the lesson in Teleskwela because it's too early (G12:F).

This is in line with Basilaia and Kvavadze (2020) who clarify that the transition to a new-normal set-up must examine the effectiveness of online learning regarding its outcome and delivering quality to the students.

Since the learners cannot follow the schedule online, they tend to watch Teleskwela via Facebook or youtube.

(3) Unstable internet connection

However, another issue they do not want is the poor internet connection and technical issues when watching Teleskwela online. Here is one of the participant's responses.

When I am watching Teleskwela, the internet connection is poor and the laptop that I'm using is defective (G12:F).

This entails that the poor internet connections affect students learning which conforms with a study that such as in India and the Philippines, with 5.5 Mbps and 6.5 Mbps, the slowest average link speeds among the Asia Pacific countries/regions surveyed (Akamai, 2017).

The problems and issues in the schedule of Teleswela and the facing poor internet connection to watch Teleskwela can be resolved if the teacher constantly updates the students on the airing schedule of Teleskwela on TV. Foronda and Marasigan (2021) found that one main factor that may affect students' loss of interest to learn is the teacher-based adversities, students who experienced teachers' little dedication to teaching affects negatively their learning performance in science.

(3) Unfavorable learning at home for many students

Another challenge they brought out is the noise; they cannot focus on listening and watching Teleskwela because they were distracted by their surroundings. Here are the views of participants on describing their experiences of watching Teleskwela at home.

It's enticing to watch Teleskwela especially when you're learning but sometimes, I can't focus on what I'm watching because of the noise around me (G12:M).

Maybe when I'm watching Teleskwela on my cellphone, there are a lot of noises around me, that is why when I'm watching on my cellphone, I'm tempted to play on my cellphone and don't continue watching or don't watch anymore (G12:F).

They were also distracted by too many workloads on the school, and the additional workloads in the house.

We are having a hard time because we do a lot of household chores, and we can't keep up with the lesson in every subject we are supposed to watch (G12:F).

It's hard for me to watch Teleskwela because sometimes when I watch Telaskwela, I am distracted and sometimes I have to do something at home, but, while I'm doing household chores, what I have to do is still watch Teleskwela (G12:F).

This agrees with the study of Biswas et al. (2020) which suggests that learners are distracted by the different workloads in the house. Students are having a hard time managing their time on schoolwork and household work, especially to the condition of their learning environment. Thus, the teacher must inform the parents of the learning conditions of the students at home, so that parents can provide a good learning environment at home to gain optimized learning outputs.

Conclusion

Based on the result of the study, Teleskwela may be considered one of the best supplementary teaching-learning materials provided by the Department of Education in Pampanga. It seems to be effective in helping students to understand critical concepts in science despite the challenges brought by the COVID-19 pandemic. Additionally, it confirms that the students have acquired their required learning competencies in science in the remote context, ensuring the DepEd learning continuity plan's success. The safety of the students is also ensured when learning while watching Teleskwela at home. While learning at home, Teleskwela also helps learners to feel excited and motivated to quickly answer their self-learning modules. Thus, this study has concluded that it is vital to provide appropriate learning material such as Teleskwela to help the students easily understand science concepts during this time of the pandemic. However, based on the responses of the students, Teleskwela has limited examples and the teacher discussants are fast in delivering the lesson due to limited airtime provided per subject. To minimize the problems and difficulties faced by the learners, Teleskwela teacher scriptwriters must simplify the lesson and provide more contextualized examples so that students could relate more to them. Thus, the findings of the study may give an opportunity to develop guidelines for producing educational TV programs and knowledge channels in a hybrid education. In addition, the TV program production team must ensure an organized and planned knowledge channel to deliver quality learning material.

Recommendation

The results of the study recommended that Teleskwela needs to be reviewed in terms of the length of each episode and module and provide more contextualized examples so that students could relate more to them.

There are also emerging issues and challenges in some external factors such as learners cannot follow the schedule of Teleskwela on television, poor internet connection, and technical issues. This can be resolved if the teacher constantly updates the students on the airing schedule of Teleskwela on TV.

Furthermore, the parent and teacher collaboration must resolve the emerging challenge brought by the surrounding at home, such as the distracting noise and the additional household workloads at home. Parents must provide a good condition of learning at home for their child to gain optimized learning.

The production and airing of Teleskwela must continue even after the pandemic in the provision of continuous improvement of the TV program. More research is recommended to be done about Teleskwela as learning material in the COVID-19 pandemic for future researchers. Employing a large sample size to generate more complete data for context generalization should also be considered.

References

- Adnan, M. (2020b). Online learning amid the COVID-19 pandemic: Students perspectives. Journal of Pedagogical Sociology and Psychology, 1(2), 45–51. https://doi.org/10.33902/jpsp.2020261309
- Akamai. (2017). Akamai's State of the Internet. Akamai, 10(1). Retrieved from https://www.akamai.com/us/en/multimedia/documents/ state-of-the-internet/q1-2017-state-of-the-internetconnectivityreport.pdf
- Atieh, N. (2020). The attitudes of the students enrolled in Jordanian universities towards distance education during the Coronavirus Pandemic. *Journal of Education and Practice*. https://doi.org/10.7176/jep/11-25-07
- Basilaia, G., &Kvavadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. Pedagogical Research, 5(4).
- 5. Beritasatu. (2020). Education Ministry Teams Up with TVRI to Deliver Distance Learning. Jakarta Globe. Retrieved from: https:// jakartaglobe.id/news/education-ministry-teams-upwith-tvri-to-deliver-distance-learning
- Bhadani, K., Stöhr, C., Hulthén, E., Quist, J., Bengtsson, M., Evertsson, M., & Malmqvist, J. (2017). Students Perspectives On Video-Based Learning In Cdio-Based Project Courses.Paper presented at the Proceedings of the 13th International CDIO Conference, Calgary, Canada.
- 7. Biswas, K., Asaduzzaman, T., Evans, D., Fehrler, S., Ramachandran, D., &Sabarwal, S. (2020).
- 8. TV-based learning in Bangladesh: Is it reaching students? World Bank. https://openknowledge.worldbank.org/handle/10986/3 4138
- 9. Brecht, H. D. (2012). Learning from online video lectures. Journal of Information Technology Education: Innovations in Practice, 11, 227-250.
- Chan, J. R., Marasigan, A. C., & Santander, N. T. (2021). Multigrade teachers' experiences and learning assessments on modular remote teaching during the COVID-19 pandemic. *International Journal of*

Research Studies in Education, 10(6). https://doi.org/10.5861/ijrse.2021.6

- Delen, E., Liew, J., & Willson, V. (2014). Effects of interactivity and instructional scaffolding on learning: Self-regulation in online video-based environments. Computers & Education, 78, 312–320. https://doi.org/10.1016/j.compedu.2014.06.018
- DepEd. (2020). Official Statement Department of Education. Retrieved from https://www.deped.gov.ph/2020/05/06/officialstatement-2
- 13. DepEd TV highlights milestones in INSET 2021 | Department of Education. (2021, March 18). Department of Education. https://www.deped.gov.ph/2021/03/18/deped-tvhighlights-milestones-in-inset-2021/
- Elnikova, G. A., Nikulina, N. N., Gordienko, I. V., and Davityan, M. G. (2020). Distance Education in Universities: Lessons from the Pandemic. Eur. J. Mol. Clin. Med. 7 (1), 3253–3529. ISSN: 25158260.
- Gordy, X. Z., Sparkmon, W., Imeri, H., Notebaert, A., Barnard, M., Compretta, C., Dehon, E., Taylor, J., Stray, S., Sullivan, D., & Rockhold, R. W. (2021). Science teaching excites medical interest: A qualitative inquiry of science education during the 2020 COVID-19 pandemic. *Education Sciences*, *11*(4), 148. https://doi.org/10.3390/educsci11040148
- Makarovskikh, T. A. (2021). The influence of the distance season on teaching students of senior courses to program in 1C. *Informatics and Education*, (2), 69–75. https://doi.org/10.32517/0234-0453-2021-36-2-69-75
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. International Journal of Educational Research Open, 1, 100012. https://doi.org/10.1016/j.ijedro.2020.100012
- Nsengimana, T., Bazimaziki, G., Nyirahabimana, A., Mushimiyimana, J. B., Mutarutinya, V., Mugabo, L. R., & Nsengimana, V. (2021). Online learning during COVID-19 pandemic in Rwanda: Experience of postgraduate students on language of instruction, mathematics and Science Education. *Contemporary Mathematics and Science Education*, 2(1). https://doi.org/10.30935/conmaths/10788
- Pal, D., & Patra, S. (2020). University Students' Perception of Video-Based Learning in Times of COVID-19: A TAM/TTF Perspective. International Journal of Human–Computer Interaction, 1–19. https://doi.org/10.1080/10447318.2020.1848164
- Perez-Navarro, A., Garcia, V., & Conesa, J. (2020). Students' perception of videos in introductory physics courses of engineering in face-to-face and online environments. Multimedia Tools and Applications, 80(1), 1009–1028. https://doi.org/10.1007/s11042-020-09665-0.
- Perez-Navarro, A., Garcia, V., & Conesa, J. (2021). Students' Behavior and Perceptions Regarding Complementary Videos for Introductory Physics Courses in an Online Environment. Applied Sciences, 11(2), 523. https://doi.org/10.3390/app11020523
- Prahani, B. K., Suprapto, N., Rachmadiarti, F., Sholahuddin, A., Mahtari, S., Suyidno, & Siswanto, J. (2021). Online Scientific Creativity Learning (OSCL)

in Science Education to Improve Students' Scientific Creativity in Covid-19 Pandemic. *Journal of Turkish Science* Education, 77–90. https://doi.org/10.36681/tused.2021.73

- Ray, S., & Srivastava, S. (2020). Virtualization of Science Education: A Lesson from the COVID-19 pandemic. *Journal of Proteins and Proteomics*, *11*(2), 77–80. https://doi.org/10.1007/s42485-020-00038-7
- Reeves, T., Caglayan, E., & Torr, R. (2017b). Don't shoot! understanding students' experiences of videobased learning and assessment in the arts. Video Journal of Education and Pedagogy, 2(1), 1–13. https://doi.org/10.1186/s40990-016-0011-2
- Solis-Foronda, M., & C. Marasigan, A. (2021). Understanding the students' adversities in the science classroom. *Journal of Education and e-Learning Research*, 8(1), 52–58. https://doi.org/10.20448/journal.509.2021.81.52.58
- 26. Sunstar. (2021, May 5). https://www.sunstar.com.ph/tags/Super-K%20TeleskwelaT, M., S, A., Aditya, K., & Jha, G. K. (2020). Students' Perception and Preference for Online Education in India During COVID -19 Pandemic. SSRN Electronic Journal, 1–11. https://doi.org/10.2139/ssrn.3596056
- 27. Toquero, C. M. (2020). Challenges and Opportunities for Higher Education amid the COVID-19 Pandemic: The Philippine Context. Pedagogical Research, 5(4), em0063. https://doi.org/10.29333/pr/7947
- 28. Tria, J. Z. (2020). The COVID-19 Pandemic through the Lens of Education in the Philippines: The New Normal. International Journal of Pedagogical Development and Lifelong Learning, 1(1), ep2001. https://doi.org/10.30935/ijpdll/8311
- 29. UNESCO. (2020). COVID-19 Educational Disruption and Response. Retrieved from https://en.unesco.org/covid19/educationresponse