Digital and Collaborative Tools Integration in Teaching: A Basis for Training Implementation

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Abstract

One of the areas affected by this 2019 Novel Corona is education. Educators had stopped the conduct of face to face classes since it had been instantly cancelled wherein obliging many schools to immediately convert to different teaching modalities had been adopted. Integration of digital and collaborative tools in the delivery mode of teaching is needed in order to engage students in active learning. This study aimed to conduct a training needs assessment among the ISPSC Educators to assess their level of knowledge along digital and collaborative tools in the delivery mode of teaching as a basis for training implementation. Respondents include ISPSC Educators of Ilocos Sur Polytechnic State College. Data were collected, tallied and analyzed. The weighted mean was computed to analyze and interpret the training needs assessment among Educators. Findings suggested that this study enabled the ISPSC Educators to leverage their technology skills prioritizing the use and integration of digital and collaborative tools to engage students in active learning. The level of knowledge based on the training needs assessment resulted in a weighted mean of 1.72 interpreted as "No Knowledge" which means ISPSC educators must undergo training on different digital and collaborative tools integrating it in their mode of teaching delivery. The study findings are useful to ISPSC Educators intending to integrate the digital and collaborative tools in their teaching mode of delivery to better maintain the engagement of students in collaborative learning.

Digital and Collaborative Concepts

*• **Digital and Collaborative tools** → application; • **Integration** → the use of technology in teaching; • **Teaching Delivery**→ refers to style and strategy using application software; • **Training Implementation** → the conduct of training of digital tools to educators.*

Keywords

Digital and collaborative tools, integration, teaching delivery, training implementation.

INTRODUCTION

Collaboration and engagement yield a better knowledge construction. Educators show great impact to student learning, from delivering and imparting academic knowledge in the traditional classroom, instilling optimistic behaviour and motivation to learn up to the creation of a conducive learning environment. But in the midst of the first quarter of 2020, the Philippines, COVID 19 has totally impacted most lives and one of the areas affected is education. Educators had stopped the conduct of face to face classes since it had been instantly cancelled wherein obliging many schools to immediately convert to different teaching modalities had been adopted. With the untoward incident, a memorandum no. 4 series of 2020 had been issued by the Commission on Higher Education subjecting guidelines to be implemented to both the public and private Higher Education Institutions (HEIs) on Flexible Learning [1].

From the situation mentioned, the researcher had seen the opportunity to conduct a study, in connection to the urgent need of educators to explore and integrate innovative learning modalities in order to provide access to education and continue to provide quality education to students [1]. What educators are facing today is a challenge with the highlight on the significance of digital competence. Digital and collaborative tools integration is an increasingly common feature in the conduct of virtual classrooms which facilitates

learning and helps educators create more-efficient instruction guides. But extremely, learning the use of these technologies may be difficult, especially as more tools, applications, and systems are booming [2]. According to studies, there is an absence of educator's training mainly on in-adequacy digital collaborative tools training in the online learning modality delivery. [3] A training needs assessment survey was administered to Educators of the 6 campuses of ISPSC to assess their level of knowledge in digital and collaborative tools as a basis for training implementation. According to (Corbett & Redding, 2017) he considered that an investigation of current training is a needs assessment, a model of what training should be [4]. Based on the assessment conducted, a continuing professional development training workshop on digital and collaborative tools to educators may be administered to reciprocate the needs of students to continuum education as well as addressing the memorandum on the flexible learning issued by CHED office.

In the conduct of this study through a needs assessment survey, the level of knowledge in digital and collaborative tools would ease the burden on both the educator and the student by keeping them informed and engaged regarding the daily lesson activities [5]. The researcher hoped that the result of the study would be beneficial and of great help to ISPSC Educators intending to integrate the digital and collaborative tools in their teaching mode of delivery and to

students as well to better improve their active learning that encourages collaboration and creative expression.

METHODOLGY

In the conduct of this study, a descriptive survey questionnaire method of research was used. Davis (2021) stated that data gathering about varying subjects is a descriptive-survey research type targeting the extent to which unalike conditions can be attained among these topics [6].

Following descriptive survey questionnaire method, the researcher underwent activities that identified certain objectives. A training needs assessment survey was conducted to assess the level and of knowledge and skills of ISPSC Educators along the digital and collaborative tools in their mode of delivery. Further, a question was also asked to determine other tools to be included to further leverage their skills and knowledge. A training needs assessment tool designed by the researcher was used to gather the needed data. The survey questionnaires were administered online using MS form to Educators of the 6 campuses of ISPSC namely Narvacan, Sta. Maria, Santiago, Candon, Tagudin and Cervantes Campus. There were 150 respondents who participated. The weighted means were computed to determine the level of knowledge and skills of the respondents along the areas of digital and collaborative tools.

Data Analysis

To enable the researcher to come up with a reliable and valid interpretation of the data gathered, the data were analysed statistically. In the assessment of level of knowledge of the educators along digital and collaborative tool in teaching the general average mean was utilized.

Table 1. The data on these were analysed and interpreted using the Likert Rating Scale five

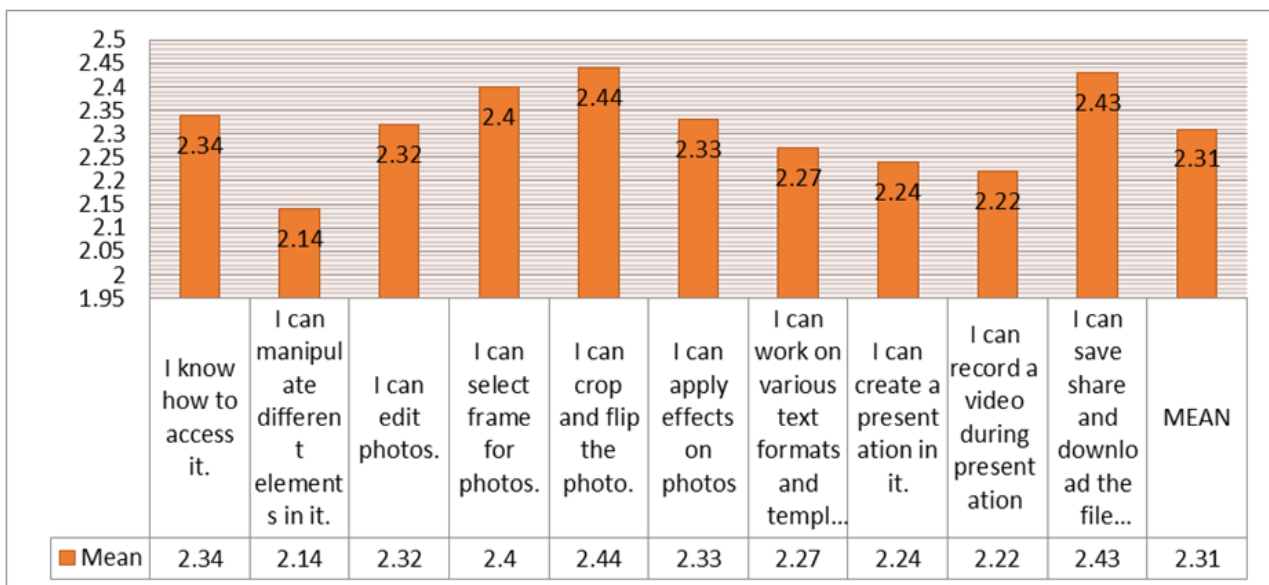| POINT VALUE	STATISTICAL LIMIT	DESCRIPTIVE EQUIVALENT RATING	Descriptive Interpretation
5	4.20-5.00	Fully Knowledgeable	No Development Required
4	3.40-4.19	Good Level of Knowledge	No development Required
3	2.60-3.39	Some Knowledge	No Development Required
2	1.80-2.59	A little knowledge	Skill Development Required
1	1.00-1.79	No Knowledge	Skill Development Required

Responses ranging from 2.60-5.00 means that respondents perceived the tool as no development required. However, if mean responses fall below 2.59, the respondents are recommended to undergo training. And in order to implement a training to educators, the researcher must prove that respondents need skill development on the digital and collaborative tools in teaching delivery.

Whitsett, (2018), believed that online collaboration tools are indeed significant since this technology tool can be used to assist people work together and collaborate online to reach to attain a common goal.

RESULTS AND DISCUSSIONS

Based on survey questionnaire administered to the educators on the digital and collaborative tools, the following are the results obtained on the assessment of the level of knowledge and skills on the following tools

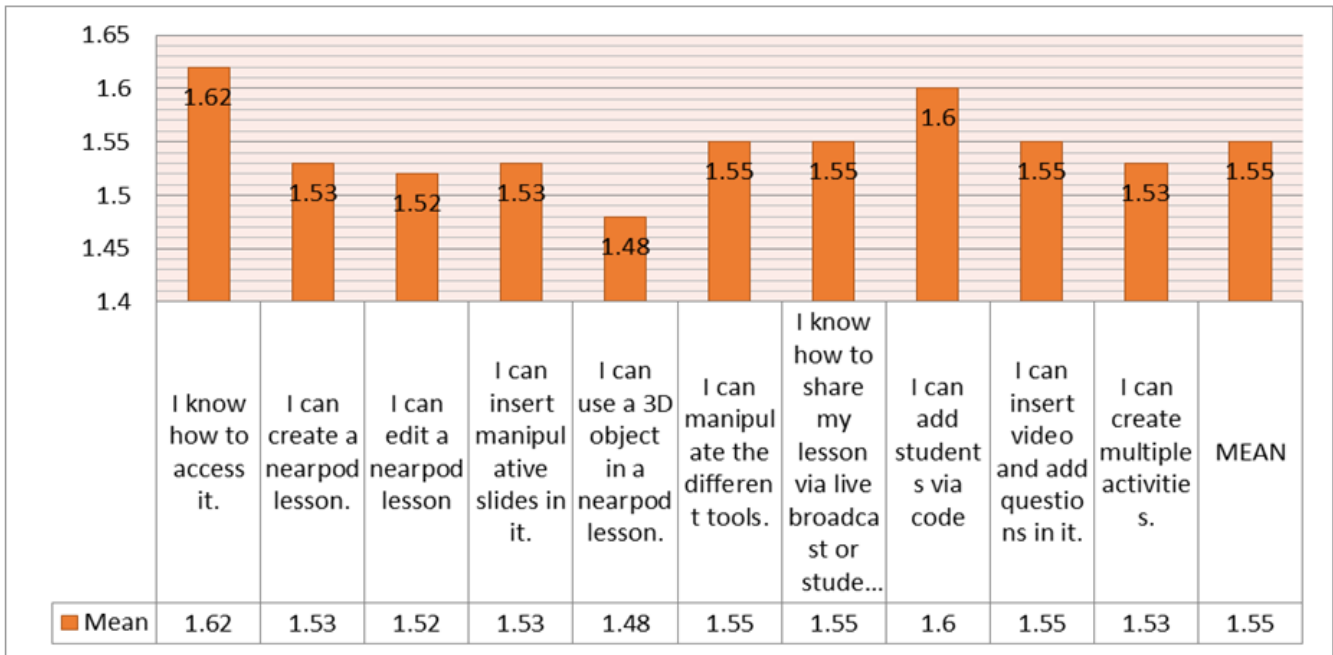|	I know how to access it.	I can manipulate different elements in it.	I can edit photos.	I can select frame for photos.	I can crop and flip the photo.	I can apply effects on photos	I can work on various text formats and templ...	I can create a presentation in it.	I can record a video during presentation	I can save share and download the file...	MEAN
Mean	2.34	2.14	2.32	2.4	2.44	2.33	2.27	2.24	2.22	2.43	2.31

Figure 1. Level of knowledge and skills using CANVA for Graphics

The level of knowledge and skills of the respondents in using Canva for graphics has an overall mean of 2.31 which is described as "a little knowledge". All the specific skills in using this tool had a means below 2.59. This results implies that the respondents are not familiar with this tool and training implementation is required in order to equip the faculty with the skills in using Canva. [7], described, canva tools is a free graphic design which allows educators to easily create professional quality visuals yielding resources into effortlessly useable visual content, thus giving the competitive advantage in teaching [7].
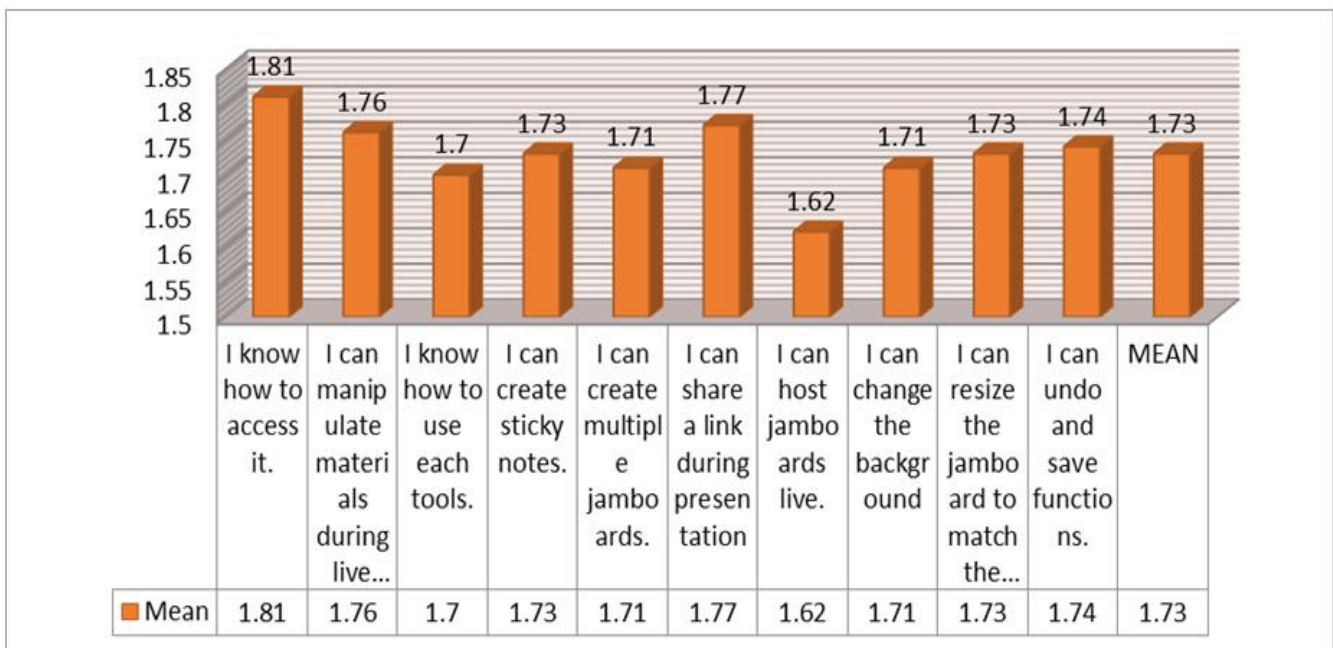
Coldwell-Neilson (2018), stated that in order to attain new authentic and meaningful learning experiences of students, there must be an integration of technologies in the classroom setting.

	I know how to access it.	I can create a nearpod lesson.	I can edit a nearpod lesson	I can insert manipulative slides in it.	I can use a 3D object in a nearpod lesson.	I can manipulate the different tools.	I know how to share my lesson via live broadcast or stude...	I can add students via code	I can insert video and add questions in it.	I can create multiple activities.	MEAN
■ Mean	1.62	1.53	1.52	1.53	1.48	1.55	1.55	1.6	1.55	1.53	1.55

Figure 2. Level of knowledge using NEARPOD

The level of knowledge and skills of the respondents using Nearpod garnered a grand mean of 1.55 wherein respondent has no knowledge using this tool.

Riley and Myers (2014) projected that teaching interactively, and related approaches, are encouraged in a classroom where students' insights are refreshed, anticipated and drawn-out to others.

	I know how to access it.	I can manipulate materials during live...	I know how to use each tools.	I can create sticky notes.	I can create multiple jamboards.	I can share a link during presentation	I can host jamboards live.	I can change the background	I can resize the jamboard to match the...	I can undo and save functions.	MEAN
■ Mean	1.81	1.76	1.7	1.73	1.71	1.77	1.62	1.71	1.73	1.74	1.73

Figure 3. Level of knowledge using JAMBOARD

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A little knowledge among the respondents in accessing Jamboard has prevailed with a mean of 1.81. However, the other items revealed that the respondents have no knowledge with an overall mean of 1.73. Skills development is required for the respondents.
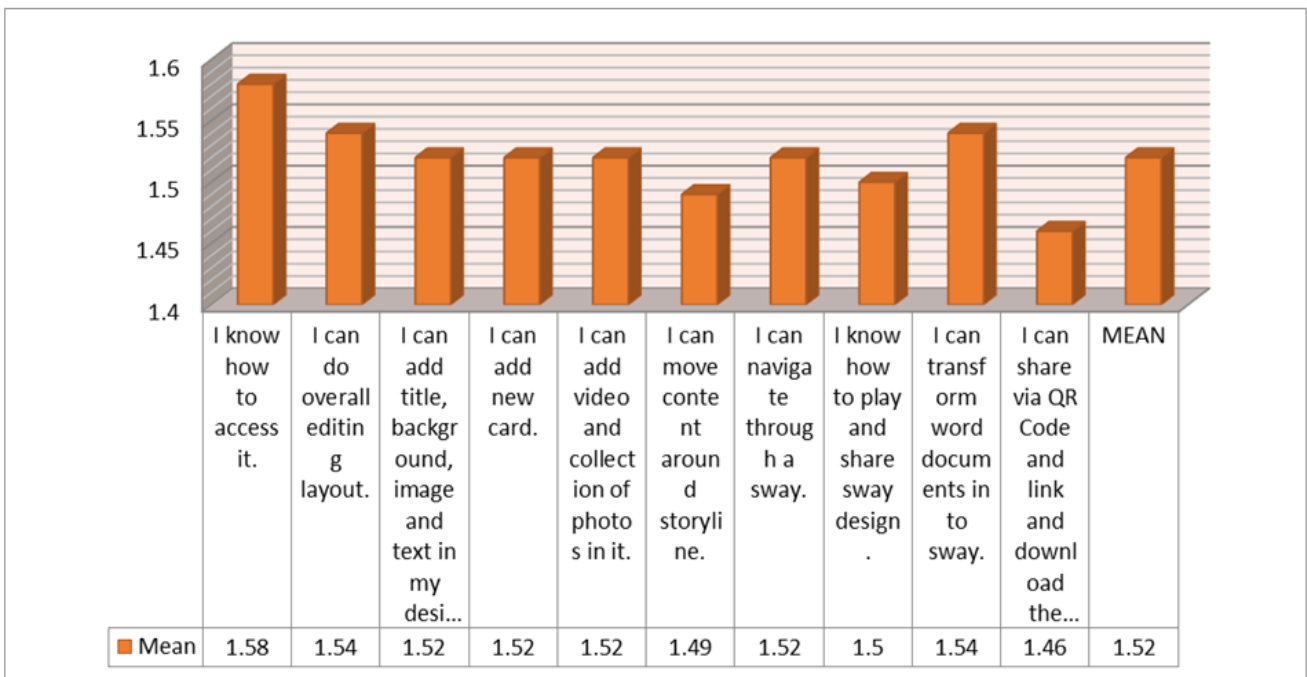
[10] The quick transition to remote teaching has highlighted the necessity online tools that are inexpensive and manageable in support to a collaborative environment as teaching tool during the pandemic and beyond.
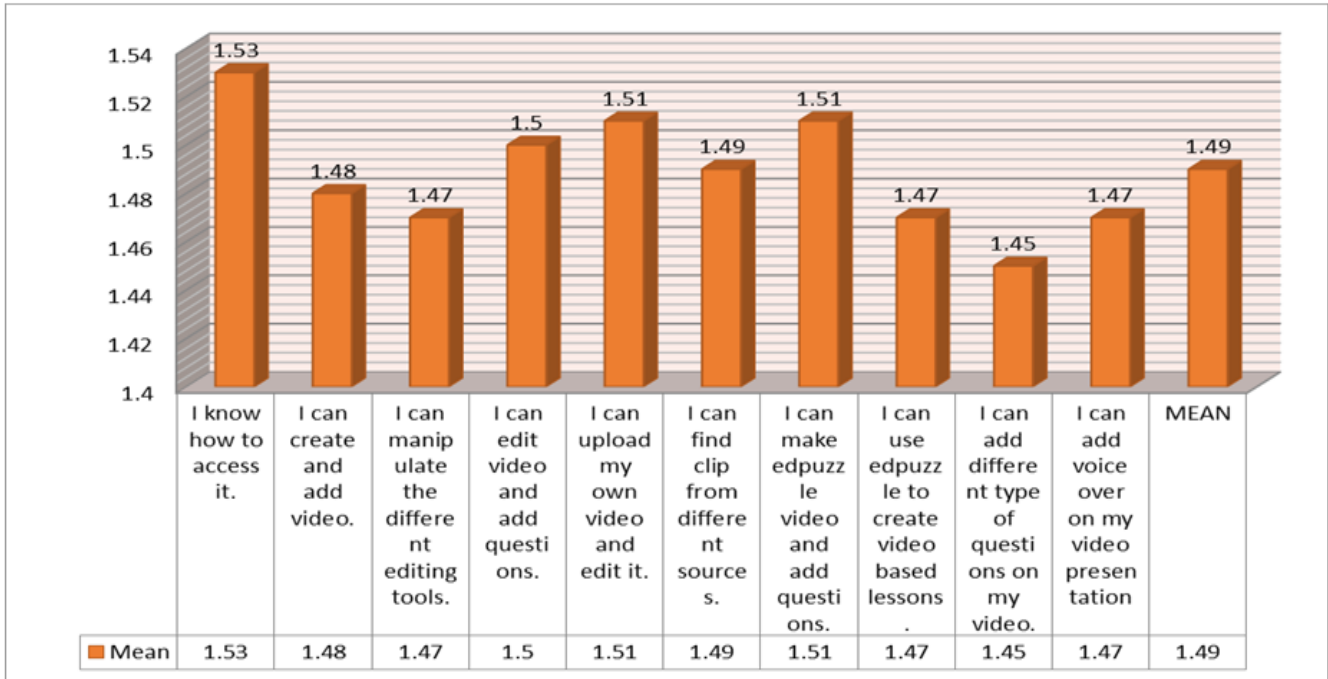
Figure 4. Level of knowledge using EDPUZZLE

A skill development is required in using this Edpuzzle tool as shown by the grand mean of 1.49. All the items registered a mean below 1.79 indicating that respondent has no knowledge in this tool features.

Mishra, Gupta & Shree (2020), considered that it is expected that educators must contribute particular innovative knowledge to come out with effective and successful teaching and learning procedures in the learning implementation.

Figure 5. Level of knowledge using MS SWAY

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Respondents has no knowledge in using MS. Sway tools which requires skills development resulting to a mean of 1.52.

Hutchinson (2020), stated that one of the platforms that can be used to create interactive presentations and content that may not include presenter is Microsoft sway which allows showcasing and demonstrating educator's digital literacy skills.

As Istiqomah (2016) stated that this application can aid increase student outcome learnings. Lestari and Chasanatun (2018); and Zakia, Sagala, and Siburian (2017) proved that Microsoft Sway can help teachers and students in the demonstration of their presentations.
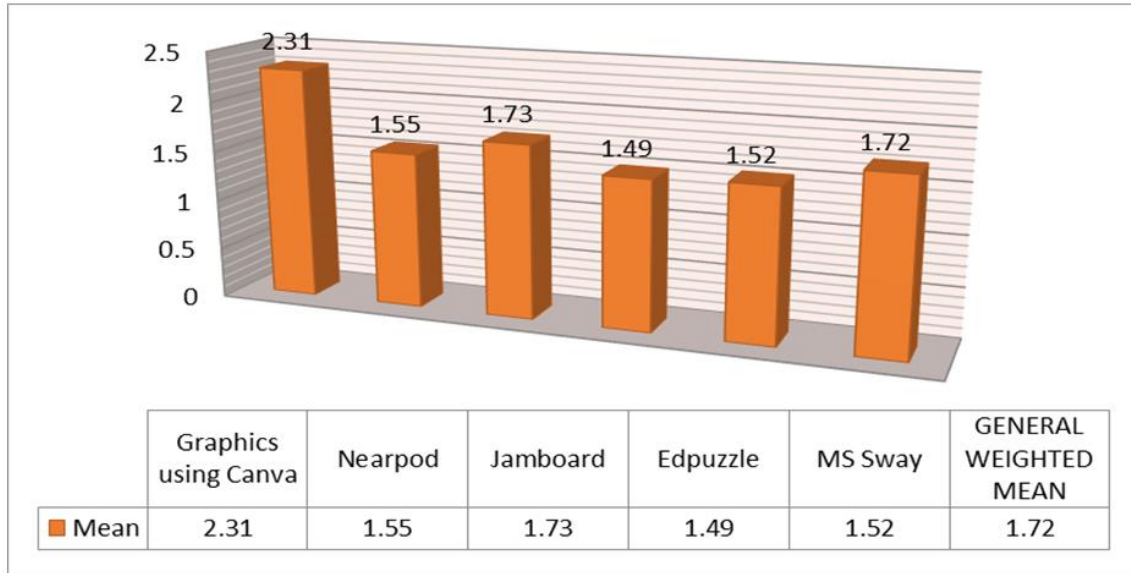
Figure 6. Summary of Digital Collaborative Tools

	Graphics using Canva	Nearpod	Jamboard	Edpuzzle	MS Sway	GENERAL WEIGHTED MEAN
Mean	2.31	1.55	1.73	1.49	1.52	1.72

The figure revealed that the respondents have little or no knowledge in using the different digital collaborative tools presented.

Among the five (5) tools presented, Canva registered the highest mean of 2.31 described as "a little knowledge". The other tools have means below 1.79 which is equivalent to "no knowledge"

A general weighted mean of 1.72 implies that skills development is required among educators. Thus, implementing a training among educators with the digital technology would help them in using the digital tools which is best considered as supplement and great tool to support teaching and learning.

As the OECD (2015) study concluded: augmenting great teaching can be done by technology but great technology never substitute unsuccessful teaching'. Educators would only attain it through taking digital tool proficiencies, able to categorize appropriate applications for teaching and assessment and integrating them into curriculum, and for classroom teaching, home activities and formative assessment adapting pedagogical approaches must be considered.

CONCLUSION & RECOMMENDATION

Based on the findings of the study, in this time of pandemic some of the digital and collaborative tools presented were not yet prevalent among educators which required a skill development. Most educators also have little and no knowledge in terms of some of the digital and collaborative tools particularly in its accessibilities and manipulations most of the educators never used and integrate it yet in their teaching mode of delivery.

It is recommended that a training implementation must be conducted among educators through seminar workshop since some of the digital and collaborative tools presented were not yet prevalent to them. Educators are also required to develop their digital and collaborative tool skills in the conduct of flexible learning. And the integration of the presented technology in the delivery mode of teaching is a must in order to obtain a better engagement of educators and learners in collaborative learning.

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