

## CHALLENGES FACING STUDENT NURSES IN THE USE OF INSTRUCTIONAL TECHNOLOGIES

*Joy Grace I. Sevilla, Apple M. Buenaventura,  
Louise Claire J. Diño, Ellaine C. Siguenza,  
and Christian Brenold V. Sabariaga*

### Abstract

Instructional Technology is utilization of resources for learning which makes students and teachers improve educational information and experience. Our study was conducted to determine possible ways of overcoming challenges facing Student Nurses in the use of Instructional Technologies. We used a reconstructed questionnaire to determine the capabilities, preferences and the challenges students face in the use of Instructional Technologies and ways to overcome the challenges. The sample size was 47 selected students from Baliuag University College of Nursing Level 1 to 4. The top 3 capabilities and preferences of Student Nurses were; First was sending files communicating and sharing information online was helpful, with weighted mean of 4.55, then, their teachers uses computer and PowerPoint in teaching with weighted mean of 4.42 and lastly, they learned a lot with educational and instructional videos documentaries with weighted mean of 4.41. It is found that the top 3 challenges faced by student nurses in the use of Instructional Technology are; PowerPoint presentation were shown too fast before they could even read or copy the content with weighted mean of 4.02. Next is that PowerPoint presentation are too long which are hard to remember with weighted mean of 3.45 and lastly, there is unreliable/slow internet connection in their school with weighted mean of 3.43. Bound books and e-books both have advantages and disadvantages, a reason why the Student Nurses perception is undecided. Teachers and students need to exert extra effort in adjusting in problems that hinders teaching and learning. Students need to be responsible and study in advance for their scheduled lectures. Teachers need to listen patiently to student concern and give the source of their discussion as well as handouts if resources are not readily available in the library so the students can follow.

**Keywords:** Instruction, Technology, Student Nurses

## The Problem and its Background

This chapter discusses what the research is all about. It contains the statement of the problem, purpose, objective, significance of the study and definition of terms.

### Introduction

In today's generation, technology has been part of our lives, every aspect of human activity is affected. By the use of Instructional Technology, it can speed up the delivery of information and also the costs of accessing educational material are cut down and it makes it easy for students to learn from anywhere.

It has the potential role to play in the field of education and training. Also, it becomes the major source of teaching and learning in higher education. With this study, want to determine the capabilities, preferences and the challenges students face in the use of Instructional Technologies. Also, it aims to determine possible ways of overcoming those challenges.

Teaching practice provide the students to apply their knowledge and skills in practice. Learning is the foundational status of all skills. We are lifelong learners and we get to learn what we hear and see, but most of us usually get bored to read long texts without any images to imagine. We usually prefer to listen when our professor have their audio-visual with them as well as visual illustration using images on projectors that students can be interested with. Students who are engaged and interested in things they are studying, are expected to have better knowledge retention. Technology can help to encourage active participation in the classroom which is a very important factor for increased knowledge retention. Different forms of technology can be used to experiment with and decide what works best for students in terms of retaining their knowledge.

Instructional technology makes it easy to access academic information at any time. Both students and teachers use Instructional Technology to acquire and exchange educational material.

### Statement of the Problem

Our study aims to answer the following questions:

1. What are the capabilities and preferences of Students in using Instructional Technologies?
2. What challenges do Students face in the use of Instructional Technologies?
3. What are possible ways of overcoming the challenges the Students are facing?

### Objectives

The objective of our study is to determine the capabilities, preferences and the challenges students face in the use of Instructional Technologies.

### Purpose of the Study

The purpose of our study is to determine possible ways of overcoming challenges facing Student Nurses in the Use of Instructional Technologies.

### Significance of the Study

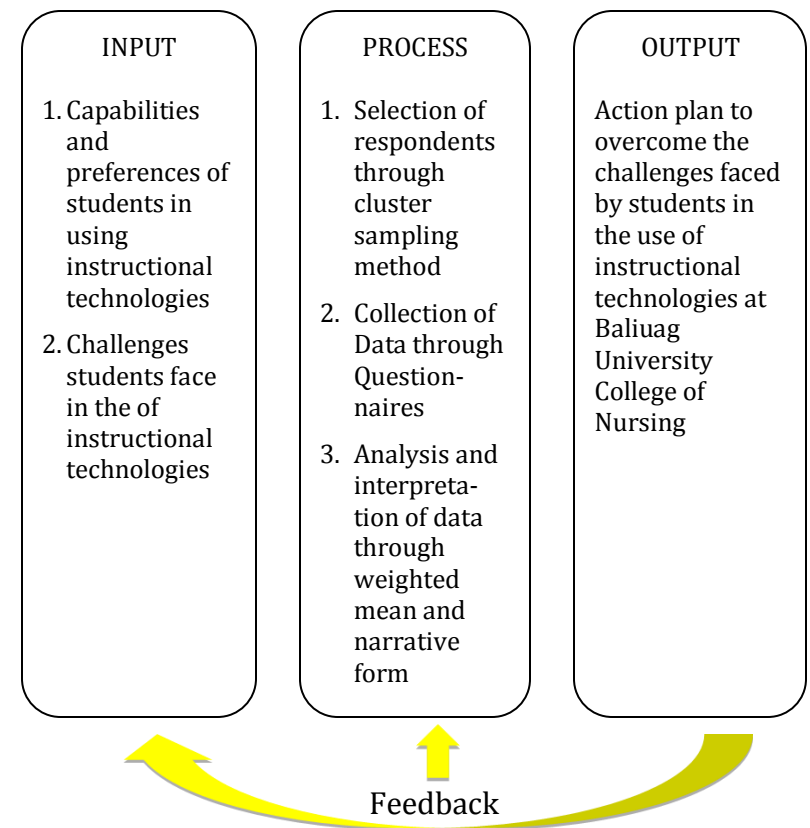
Today, Instructional Technology has been widely used in the field of education. Our study will help us to determine its impact on the teaching-learning process of Student Nurses based on their own perception. Vital results of this study are significant to the following:

Student Nurses. They will be able to determine the advantages and disadvantages of using Instructional Technology on education. They can raise their opinion on how it can be better utilized to improve their education.

Teachers. They will be able to determine the efficiency of the delivery of the subject matter with regards to the use of Instructional Technology and how it can be proper and better utilized based on the Student Nurses' perception.

Baliuag University Administration. They will be able to determine needs for improvement on providing Instructional Technology services within the campus.

### Conceptual Framework



The system approach is used in describing the conceptual framework of our study. The Input consists of capabilities and preferences of Students in using

Instructional Technologies. Also, the challenges Students are facing in the use of Instructional Technologies.

The Process consists of selection of 47 respondents from first to fourth year nursing students through Non-Probability Purposive Sampling, then, collection of data through handing out Questionnaires which is composed of Likert scale and open-ended questions, lastly, analysis and interpretation of data through weighted mean and narrative form.

The Output is consisting of formulating an action plan to overcome the challenges faced by Students in the use of Instructional Technologies at Baliuag University College of Nursing.

### **Methodology**

This chapter describes the type of the research, the sampling procedure, the research instrument, the statistical treatments and the data collection procedure.

#### **Research Design**

Our study is a descriptive type of research which helps provide answers to the questions of who, what, when, where and how associated with a particular research problem. It is used to obtain information concerning the current status of the phenomena and to describe what exists with respect to variable or conditions in a situation.

#### **Sample and Sampling Procedure**

The research sampling method that we used in our study was Non-Probability Purposive Sampling. This technique was employed to represent a total population as it will produce well matched groups. The respondents were selected based on the purposive personal judgement of the researchers.

The sample size was 47 selected students from Baliuag University College of Nursing Level 1 to 4 with experience in using Instructional Technology.

#### **Research Instrument**

The instrument that was used in our study was a Questionnaire that we modified. The first item uses Likert Scale to determine the capabilities and preferences in using Instructional Technologies of Student Nurses which answers the statement of the problem number 1. The second item, also uses Likert Scale to determine the challenges facing Student Nurses in using Instructional Technologies and the third item uses open-ended question which answers statement of the problem number 2. And the fourth item is also an open-ended question which answers statement of the problem number 3.

#### **Statistical Treatment of Data**

Frequency and Percentage distribution that described the Profile of the Respondents using the formula:

$$\text{Percentage (\%)} = \frac{F \times 100}{N}$$

Where:

% = Percentage

F = Frequency

N = Total number of population

Measures of Central Tendency (Mean) that described the Capabilities, Preferences and Challenges of Student Nurses in the use of Instructional Technology using the formula:

$$WM = \frac{F \times D}{N}$$

Where:

WM = Weighted Mean    N = Total Number of Respondents

F = Frequency        D = Degree of Agreement

### Interpretation of Descriptive Values for Capabilities and Preferences of Student Nurses in the use of Instructional Technology

Numerical Value	Descriptive Value	Description
1.00-1.80	Strongly Disagree	The Student Nurses Strongly Disagree in the statements referring to their working knowledge and preferences regarding Instructional Technology.
1.81-2.60	Disagree	The Student Nurses Disagree in the statements referring to their working knowledge and preferences regarding Instructional Technology.
2.61-3.40	Undecided	The Student Nurses were undecided in the statements referring to their working knowledge and preferences regarding Instructional Technology.
3.41-4.20	Agree	The Student Nurses Agree in the statements referring to their working knowledge and preferences regarding Instructional Technology.
4.21-5.00	Strongly Agree	The Student Nurses Strongly Agree in the statements referring to their working knowledge and preferences regarding Instructional Technology.

### Interpretation of Descriptive Values for Challenges faced by Student Nurses in the use of Instructional Technology

Numerical Value	Descriptive Value	Description
1.00-1.80	Strongly Disagree	The Student Nurses Strongly Disagree in the statements regarding challenges that they have experienced in the use of Instructional Technology
1.81-2.60	Disagree	The Student Nurses Disagree in the statements regarding challenges that they have experienced in the use of Instructional Technology

Numerical Value	Descriptive Value	Description
2.61-3.40	Undecided	The Student Nurses were undecided in the statements regarding challenges that they have experienced in the use of Instructional Technology
3.41-4.20	Agree	The Student Nurses agree in the statements regarding challenges that they have experienced in the use of Instructional Technology
4.21-5.00	Strongly Agree	The Student Nurses Strongly Agree in the statements regarding challenges that they have experienced in the use of Instructional Technology

### Data Collection Procedure

We gave an approval letter to Dean Elizabeth R. Roxas of the College of Nursing, and was given permission to conduct research in Baliuag University College of Nursing to determine the Challenges faced by Student Nurses in the use of the Instructional Technology.

The respondents were given questionnaire and asked to answer the questionnaire honestly. The right of autonomy and confidentiality was observed and maintained.

Data was processed and analyzed with the use of categorization, tabulation, computation, analysis and interpretation of data.

## Results

**Table 1.** Frequency and Percentage Distribution of Respondents According to Age

Age	Number of students	Percentage
18-20	38	81%
21-23	3	6%
24-26	4	9%
27-29	1	2%
30-33	1	2%
N= 47		100%

Table 1 shows that 81% belong to age group between 18 – 20 years old, 9% are between age 24-26 years old, 6% are between age 21-23 years old, 2% are between the age of 27-29 years old and 2% falls between 30-33 years old. Most of the respondents are 18 to 20 years of age, mostly because college students, when they started and finished college, they are between the age of 16 to 21.

**Table 2.** Frequency and Percentage Distribution of Respondents According to Year Level

Year level	Number of students	Percentage
I-BLOCK A	11	23%
I-BLOCK B	10	21%
II	5	12%
III	10	21%
IV	11	23%
N=47		100%

Table 2 shows that 23% of the respondents came from Level IV, another 23% from Level 1 Block A, 21% from Level 1 Block B, another 21% from Level III and 12% from the Level II. The respondents are almost equally distributed

to all year levels except for the 2<sup>nd</sup> year because when the questionnaires were returned only 5 students was able to participate in the data collection.

**Table 3.** Mean Score of Capabilities and Preferences of Student Nurses in the use of Instructional Technologies

Statements	F	WM	F	WM	F	WM	F	WM	TOTAL
A. Computer Use and Preferences									
1. I enjoy a lesson where my teacher uses computer/Power Point in teaching	21	2.23	25	2.12	1	0.06	0	0	4.42
2. I very much understand the content taught with the use of charts, illustrations and map aids	29	3.09	3	0.68	5	0.32	5	0.21	4.3
3. I learn a lot with educational & instructional videos, documentaries, etc.	23	2.45	20	1.70	4	0.26	0	0	4.41
4. Sending files, communicating and sharing information online is helpful	30	3.19	14	1.19	2	0.13	1	0.04	4.55
5. I like Power point presentation than books	15	1.60	21	1.79	7	0.45	4	0.17	4.01

**Table 3.** Continuation

Statements	F	WM	F	WM	F	WM	F	WM	F	WM	TOTAL
A. Computer Use and Preferences											
6. I prefer using e-books and audio-books than bound books	8	0.85	15	1.28	11	0.70	12	0.51	1	0.02	3.36
7. I am good at using a computer to type my work	13	1.38	19	1.62	11	0.70	4	0.17	0	0	3.87
8. I like browsing the internet to learn and get more information	17	1.81	27	2.30	3	0.19	0	0	0	0	4.3
9. I like submitting online outputs and quizzes	3	0.32	11	0.94	24	1.53	7	0.30	2	0.04	3.13
10. I know how to create and manipulate word processing software	9	0.96	15	1.28	14	0.89	8	0.34	1	0.02	3.49

**Table 4.** Interpretation of the Weighted Mean of Student Nurses Capabilities and Preferences in the use of Instructional Technology

Statements	WM	Interpretation
A. Computer Use and Preferences		
1. I enjoy a lesson where my teacher uses computer/PowerPoint in teaching	4.42	The Student Nurses Strongly Agree that they enjoy a lesson where their teacher uses computer/PowerPoint in teaching
2. I very much understand the content taught with the use of charts, illustrations and map aids	4.3	The Student Nurses Agree that they understand the content taught with the use of charts, illustrations and map aids
3. I learn a lot with educational & instructional videos, documentaries, etc	4.41	The Student Nurses Strongly Agree that they learned a lot with educational & instructional videos, documentaries, etc.
4. Sending files, communicating and sharing information online is helpful	4.55	The Student Nurses Strongly Agree that sending files, communicating and sharing information online is helpful.
5. I like PowerPoint presentation than books	4.01	The Student Nurses Agree that they preferred PowerPoint presentation than books
6. I prefer using e-books and audiobooks than bound books	3.36	The Student Nurses were Undecided whether they prefer e-books and audiobooks than bound books

**Table 4.** Continuation

Statements	WM	Interpretation
A. Computer Use and Preferences		
7. I am good at using a computer to type my work	3.87	The Student Nurses Agree that they are good at using a computer to type their work
8. I like browsing the internet to learn and get more information	4.3	The Student Nurses Agree that they like browsing the internet to learn and get more information
9. I like submitting online outputs and quizzes	3.13	The Student Nurses were undecided regarding submitting online outputs and quizzes
10.I know how to create and manipulate word processing software	3.49	The Student Nurses Agree that they know how to create and manipulate word processing software

Table 4 shows that the 3 top capabilities and preferences of Nurses are, sending files communicating and sharing information online is helpful with weighted mean of 4.55, then, their teacher uses computer/PowerPoint in teaching with weighted mean of 4.42 and lastly, they learned a lot with educational & instructional videos, documentaries, with weighted mean of 4.41. According to Santos (2013) students today are always connected to their social network. They prove that sending information and communicating online was helpful. Students need to engage in the use of information technology in classroom.

The least capabilities and preference are, the student nurses were undecided regarding submitting online outputs and quizzes online with weighted mean of 3.13 and they were also undecided whether they prefer e-books and audio-books than bound books with weighted mean of 3.36.

According to Ericksen (2016), students prefer to consume information by reading texts and they can further absorb information by condensing and rephrasing it. The traditional college lecture and note-taking environment works well for the reading/writing learning style. At the same time, the use of Information technology makes it easier for students to receive and share information.

As stated by Bolkan (2015), traditional bound/text books do not require internet access and they are easier to navigate and bookmark. And students' like to physically highlight selections because they are easier to read. E-books makes students' eyes hurt and tablets or laptops are most of the time not allowed in class. But at the same time, e-books are accessible and portable because it can be obtained anywhere and anytime. It can also be interactive and contain audio, video and animation (Sasson, 2017).

**Table 5.** Mean Score of Challenges Faced by Student Nurses in the use of Instructional Technology-

Statements	F	WM	F	WM	F	WM	F	WM	F	WM	TOTAL
<b>B. Challenges</b>											
1. I do not own computer devices	3	0.34	10	0.85	3	0.19	12	0.51	19	0.40	2.29
2. I do not have internet connection at home	5	0.53	7	0.60	2	0.13	15	0.63	18	0.38	2.27
3. There is unreliable power supply on our school	3	0.32	9	0.77	7	0.45	13	0.55	15	0.32	2.41
4. We do not have enough time for using the internet resources	3	0.31	10	0.85	14	0.89	15	0.64	5	0.11	2.8
5. We are not allowed to access devices on class for researching purposes	4	0.43	14	1.19	8	0.51	17	0.72	4	0.09	2.94
6. Our teachers are unwilling to use some resources (e.g. computer, charts, maps, Journals, Powerpoint)	1	0.11	10	0.85	14	0.89	18	0.77	4	0.09	2.71
7. Teachers lack knowledge in the use of some resources	4	0.43	2	0.17	18	1.15	16	0.68	7	0.15	2.58

**Table 5.** Continuation

Statements	F	WM	F	WM	F	WM	F	WM	F	WM	TOTAL
<b>B. Challenges</b>											
8. There is unreliable/slow internet connection in the school	11	1.17	18	1.53	3	0.19	10	0.43	5	0.11	3.43
9. Audiovisual presentations have bad audio or video quality	2	0.21	12	1.02	14	0.89	16	0.68	3	0.06	2.86
10. PowerPoint presentations are too long which is hard to remember	13	1.38	15	1.28	6	0.38	6	0.26	7	0.15	3.45
11. PowerPoint presentation have font size/style that is not readable	7	0.74	11	0.94	12	0.77	11	0.47	6	0.13	3.05
12. PowerPoint presentation flashes too fast before I could even read or copy the content	11	1.17	28	2.38	7	0.45			1	0.02	4.02
13. Online Classroom is no utilized	6	0.64	7	0.60	22	0.95	8	0.34	4	0.09	2.62

**Table 5.** Continuation

Statements	F	WM	F	WM	F	WM	F	WM	TOTAL
<b>B. Challenges</b>									
14. Online Classroom is not helpful for me	2	0.21	6	0.51	24	1.53	10	0.43	5 0.11 2.79
15. I prefer to submit hand written requirements than online	10	1.06	12	1.02	10	0.64	7	0.30	8 0.17 3.19

**Table 6.** Interpretation of Weighted Mean of Challenges Faced by Student Nurses in the use of Instructional Technology

Challenges	WM	Interpretation
1. I do not own computer devices	2.29	Some Student Nurses Disagreed that they do not own computer devices
2. I do not have internet connection at home	2.27	Some Student Nurses Disagreed that they do not have internet connection at home
3. There is unreliable power supply on our school	2.41	Some Student Nurses Disagreed in the statement regarding unreliable power supply
4. We do not have enough time for using the internet resources	2.8	Some Student Nurses were Undecided if they do not have enough time for using the internet resources

**Table 6.** Continuation

Challenges	WM	Interpretation
5. We are not allowed to access devices on class for researching purposes	2.94	Student Nurses were Undecided if they are not allowed to access devices on class for researching purposes
6. Our teachers are unwilling to use some resources (e.g. computer, charts, maps, Journals, Power point)	2.71	Some Student Nurses were Undecided if their teachers are unwilling to use some instructional resources.
7. Teachers lack knowledge in the use of some resources	2.58	Student Nurses Disagreed if their Teachers lack knowledge in the use of some Instructional resources
8. There is unreliable/slow internet connection in the school	3.43	Some Student Nurses Agreed that they have unreliable/slow internet connection in their school
9. Audiovisual presentations have bad audio or video quality	2.86	Some of Student Nurses were Undecided if Audiovisual presentations have bad audio or video quality
10.PowerPoint presentations are too long which are hard to remember	3.45	Some Student Nurses Agreed that Power point presentations are too long which are hard to remember
11.PowerPoint presentation have font size/style that is not readable	3.05	Some Student Nurses were Undecided if PowerPoint presentation have font size/style that is not readable
12.PowerPoint presentation flashes too fast before I could even read or copy the content	4.02	Most Student Nurses Agreed that PowerPoint presentation flashes too fast before they could even read or copy the content

**Table 6.** Continuation

Challenges	WM	Interpretation
13. Online Classroom is not utilized	2.62	Some Student Nurses were Undecided if Online classroom was not utilized
14. Online Classroom is not helpful for me	2.79	Most Student Nurses were Undecided if Online classroom was not helpful for them
15. I prefer to submit hand written requirements than online	3.19	Student Nurses were Undecided if they prefer to submit hand written requirements than online

Table 6 shows that the top 3 challenges in the use of Instructional Technology were, PowerPoint presentation were shown too fast before they could even read or copy the content with weighted mean of 4.02, next, PowerPoint presentations are too long which are hard to remember with weighted mean of 3.45 and lastly, there is unreliable/slow internet connection in their school with weighted mean of 3.43. Aside from this, their answers are undecided, disagree and strongly disagree.

The use of audio-visual education helps students learn faster and easily. It is a human weakness and people do not want to read text for so long, they get bored, so the introduction of audio-visual technology in education makes students enjoy what they're learning. Visual illustration using images on projectors helps a student understand the concept, because some of these images are interesting and they look familiar to a student (Ramey, 2012).

According to Anderson, (2010), prior knowledge is extremely important in influencing how we interpret what we read and what we learn from reading. Students must have advance reading prior class. If the students were able to have knowledge about the topic that would be discussed, it would be better for them to participate in discussion. It's easier to remember a picture rather than details from a book or a lecture. Visualization is one strategy that can be used to remember information that's been read in a text book or spoken during a lecture. PowerPoint can be a highly effective tool to aid learning, but has to be used properly. One should avoid reading only lengthy texts on slides and font size should be clearly readable from the back of the room. Teachers have to use different methods to engage their students in the discussion and give enough time to the students to process the information.

Other challenges written by some Student Nurses in the Use of Instructional Technology includes:

- Most of them use PowerPoint presentation that is not coming from our books and they do not give the source
- When the teacher's presentation is fully prepared, but his/her explanation is not that good.
- The teachers only read the presentation to the point that we are only doing self-studying and not allowing us to take notes during discussion.
- Some teachers do not give copies of their PowerPoint presentation.
- Some uses boring presentations that make some students feel sleepy and bored.
- The projector/audiovisual are sometimes blurred.
- We are not able using "canvas" and some are not knowledgeable about it or how to use it.

Some Student Nurses suggest ways to overcome challenges they are facing which includes:

- Give copies of PowerPoint presentation
- Give the source of the Power point
- Give us time to write what is in the presentation.
- Instead of just reading what's in the presentation I think it's better if you apply deep understanding on it with the use of your own language.
- The teacher should know the complains of the student so that they can change they teaching strategies.
- Do not just rely on technology. Sometimes the traditional teaching is better that the modernized.
- Provide a technical care and replace the old ones' devices. Make the font readable to benefit all students.
- Please prepare a concise Power point that can be easily understood
- Ask the Clinical Instruction if possible regarding the source of their Power Point presentation.
- Provide good projector for the PowerPoint and make font larger.

## Discussion

Instructional Technology is utilization and management of process and resources for learning which makes Students and Teachers acquire exchange and improve educational information and experience.

By using the appropriate statistical treatment, frequency and percentage, measure of central tendency (mean), variance and standard deviation, it is found that the top 3 capabilities and preferences of Student Nurses were; sending files communicating and sharing information online was helpful, with weighted mean of 4.55, then, their teachers uses computer and PowerPoint in teaching with weighted mean of 4.42 and lastly they learned a lot with educational and instructional videos documentaries with weighted mean of 4.41.

Santos (2013) said that students today are always connected to their social network. They prove that sending information and communicating online was helpful. Students need to engage in the use of information technology in classroom.

The least capabilities and preferences are; the Student Nurses were undecided regarding submitting online outputs and quizzes online with weighted mean of 3.13, and they were also undecided whether they prefer e-books and audiobooks than bound books with weighted mean of 3.36.

According to Ericksen, Traditional lecture and note taking environment works well for the reading/writing learning style. On the other hand, the use of Instructional Technology makes it easier for students to receive and share information.

Traditional bound/textbooks are easier to use and students like to physically highlight and read selections (Bolkan, 2015). On the other hand, e-books are accessible

and portable and can be obtained anywhere and anytime (Sasson, 2017).

Bound books and e-books both have advantages and disadvantages, a reason why the Student Nurses perception are half way through or undecided.

Also, they are undecided about submitting online outputs and quizzes than the traditional because it also has advantages and disadvantages and it depends on the Student's preferences and learning/coping style.

It is found that the top 3 challenges faced by student Nurses in the use of Instructional Technology are; Power-Point presentation flashes too fast before they could even read or copy the content with weighted mean of 4.02. Next is that PowerPoint presentation are too long which are hard to remember with weighted mean of 3.45 and lastly, there is unreliable/slow internet connection in their school with weighted mean of 3.43.

According to Anderson (2010), Student Nurses must have an advance reading prior class and it would be easier for Students Nurses to remember the concept or topic if they will see different images, not just text or words. According to Ramey, visual illustration using images on projectors helps a student understand the concept, because some of these images are interesting and they look familiar to the student. Our brains tend to remember visual illustrations easily more than text. The use of audio-visual education helps students learn faster and easily.

Teachers and students are a team, they need to listen to the opinion of each other. Both parties need to exert extra effort in adjusting in problems that hinders teaching and learning. Students need to be responsible and study in advance for their scheduled lectures. Teachers need to listen patiently to student concern and give the source of their discussion as well as handouts if resources are not readily

available in the library so the students can follow. This also comes from the students' recommendation on ways to overcome the challenges.

## **Recommendations**

The Student Nurses should do an advance reading of the lecture scheduled for discussion to enhance their learning and participate actively in the interactive discussion. The teachers should use resources or books which the students have and avoid using different sources without giving the reference of their source and provide handouts if source is not available in the library. Also, to provide more precise and summarize PowerPoint presentation to help the Student Nurses understand the topic better.

The institution should also provide appropriate and functional equipment and practice preventive maintenance of the equipment to help teachers deliver the lecture using better visuals and for the student to understand the lecture with better audiovisual aid. Also, upgrade the internet connection to a higher and better bandwidth and throughput on a network.

The future researchers should involve more participants specially students from different department and higher levels to validate the challenges because they have more exposure in instructional technology. Future Researchers can also do a correlational study to determine if Instructional Technology is related to academic performance.

## References

- Alcantara, R.D. (2003). *Teaching strategies: For the teaching of communication arts*. Quezon City, Philippines. Katha Publishing.
- Bloom (1956). Domains of learning. Retrieved from <https://serc.carleton.edu/introgeo/assessment/domains.html>
- Bolkan (2015). *Most Students Prefer Traditional Texts over E-Books. Campus Technology*. Retrieved from <https://campustechnology.com/articles/2015/09/01/survey-most-students-prefer-traditional-texts-over-ebooks.aspx?m=1>
- Canvas. (2018). Retrieved from <https://www.canvaslms.eu/>
- Ericksen, K. (2016). Common types of learners. Retrieve from <http://www.rasmussen.edu/student-life/blogs/college-life/most-common-types-of-learners/>
- Ghavifekr, S. & Rosdy, W.A.W. (2015). *Teaching and learning with technology: Effectiveness of ICT integration in schools* (Doctoral Dissertation). Available from International Journal of Research in Education and Science (Document ID IJRES 175-191)
- Goodfriend, W. (2003). What is Learning? Retrieve from <https://study.com/academy/lesson>
- Granito, M., and Chernobilsky, E. (2012). The effect of technology on a student's motivation and knowledge retention (Doctoral Dissertation). Available from NE-RA Conference Proceedings 2012.
- Harvey & Sturgeys (2010). *The cell phone as appropriate Information Technology: evidence from The Gambia*. Retrieved from <http://journals.sagepub.com/doi/abs/10.1177/0266666910367866>

- Iverson, L., Ball, S., Harms, A., Murcek, C., Woods, S. & Young, T. (2016). *Technology in the College of Nursing: Perception and Use to Achieve Learning Outcome* (Masteral's Thesis). Available from Online Journal of Nursing Informatics
- Kandeel, N., Ibrahim, Y. (2010). *Student Nurses~perception on the impact of Information Technology on teaching and learning* (Masteral's Thesis). Available from Research Gate Database (Document ID jicte.2010070104)
- Mirzodaler, M. (2015) *Roles for a teacher leader*. Retrieved from <https://education.cu-portland.edu/blog/classroom-resources/5-roles-for-a-teacher-leader/>
- Mishra, R.C. (2011). *Teaching of Information Technology*, New Delhi. APH Publishing Corporation.
- Montery, S., Walker, M., Sorensen, E., Thompson, R., Kirklin, D., White, R., and Ross, C.(2013). *Millennial generation Student Nurses' perceptions of the impact of multiple technologies on learning* (Doctoral Dissertation). Available from Nursing Education Perspectives: The Research Journal of the National League of Nursing
- Ramey, K. (2012). *Uses of Information Technology in education*. Retrieved from <https://www.useoftechnology.com/information-technology-education/>
- Rouse, K. (2018). *Search data center. Information Technology*. Retrieved from <http://www.searchdatacenter.techtarget.com/definition/IT>
- Santos, D. (2013). *Teaching techniques*. Retrieved from <https://www.goconqr.com/en/examtime/blog/teaching-techniques/>

Sasson (2017). The Benefits and Advantages of eBooks.  
Success Consciousness. Retrieve from [https://  
www.successconsciousness.com/ebooks  
\\_benefits.htm](https://www.successconsciousness.com/ebooks_benefits.htm)

Smith. (2016). What is teaching? A definition and discussion.  
Retrieved from [http://infed.org/mobi/what-is-  
teaching/](http://infed.org/mobi/what-is-teaching/)