

The Impact on the Utilization of Courseware in the New Normal among PSU Students

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Abstract

It is evident how the pandemic has confronted the country with massive disruption in the education system, thus restraining students in all levels to acquire the knowledge and skills that physical school's endeavor to deliver- opening opportunities for the development of digital tools. Students are compelled to acquire education through home-based learning where course contents are packaged into digital forms called courseware which are accessed by students through the LMS to gain knowledge and skills required of their discipline of choice. This study aimed to examine the insights of students who use courseware as their primary medium of acquiring education obtained using a descriptive survey method in the form of questionnaires. Undergraduate students of Pangasinan State University were the respondents. The computed sample size from the population was analyzed by getting the weighted mean of the survey results. The results showed that the courseware utilized by the students of Pangasinan State University through MS Teams has high impact that promotes self-directed learning - guiding students to learn independently at their own pace without assistance from others, fostering favorable learning environment/ platform also gained high impact hence moderate impact in terms of the learning growth of students with a grand mean of 3.44 which was described as "high" and interpreted as "impactful. Thus, it is recommended that the Instructors or Professors need to maximize the use of courseware to improve learning process consistently in order to achieve higher level of learning growth.

Keywords

Courseware, new normal learning, digital platform

1. Introduction

In today's education system, learning tools should be developed in such as a way that students could learn easily, ubiquitously, and economically. There have been numerous developments of courseware that are used as tools for learning. Courseware is a learner-centered educational tool that aims to promote self-directed learning. It contains learning contents intended to attain the learning objectives of the course, various learning tasks to develop the skills required by the course and assessment methods to assess students learning growth.

Many innovative tools are used as aid in the teaching-learning activities in different schools such as the group chat application, Facebook Messenger that is up to this date is being used by many students for communicating with each other and with their teachers. Social media, such as Facebook continues to be the technologies of choice and serves as medium for sharing information and work collaboration. Schools have sought to use new technologies such as Google Meet (Google, Mountain View, California) and Zoom (Zoom, San Jose, California).

Customized forms of software are typically evident in the form of digital courseware and Learning Management Systems (LMS) are used to simulate classroom settings and facilitate academic discussions/ interactions. Learning management systems are often interconnected pre-existing technologies such as databases and digital libraries and incorporate features that meet the needs of faculty and students.

All these abovementioned innovative tools have helped many Higher Education Institutions cope with the rapid changes in education delivery modes brought about by the pandemic as the new normal setting in education commenced.

In mid-March 2020, the coronavirus disease 2019 (COVID-19) pandemic disrupted the education system in the Philippines. The government placed the major cities to lockdown and ordered local authorities to take aggressive measures to restrict movement of people and control the spread of the said disease. Schools were no exemption to the suspension of their face-to-face teaching and learning activities in all levels and urgently made to shift to online

methodologies and modes that will facilitate transition from traditional to flexible learning and to continue delivering their curriculum.

As the number of confirmed cases of infections and death rise daily, Higher Education Institutions, following the guidelines set by the Commission on Higher Education and the Inter Agency Task Force, have several weeks to restructure their curriculum, explore innovative learning modalities, train faculty and staff, and prepare students for the coming school year.

Due to the national educational downturn, there is emergence of online learning and the need for urgent innovative solutions to continue performing educational endeavors has intensified. Notwithstanding the unfavorable effect of the pandemic to the education system, continuous delivery of quality education is deemed indispensable. Hence, the new normal setting brought about by the pandemic opened opportunities for development of digital tools to augment delivery of quality education even to distant regions in the country. Furthermore, the growing availability of broadband and the digital revolution have opened up new forms of learning content production and delivery: for example, online learning opening up ready access to digital media rich content and more recently mobile learning allowing learners to access learning contents anytime and everywhere.

As it was recorded that due to the current crisis the country is facing, the highest percentage of internet users aged 16 to 64 spend more time on social media because broadband has become more accessible and affordable to Filipinos.⁽¹¹⁾ Given the increase of mobile phone or smartphone use across all sectors of Filipino society, it is evident that this highly mobile form of technology has paved the way to faster and better delivery of flexible educational opportunities to students in the new normal.

In a survey on the readiness of students of Pangasinan State University to embrace the flexible learning structure of the school, majority of students' main access to Internet is through mobile data while faculty members have internet broadband subscription in their homes. Moreover, most students possess smartphones or mobile phones that serve them various purposes.

In order for the school to continue improving the delivery of education through digital learning materials or courseware and the learning management system provided to students that will facilitate and enhance home-based learning, likewise arouse and maintain positive attitude towards achieving their learning goals, an assessment of the is deemed necessary.

In Pangasinan State University, Microsoft Teams facilitated the continued dissemination of information, delivery of education, collaboration and other educational endeavors. Microsoft Teams provides a digital platform with unsophisticated interface that allows faculty members to organize teams and channels. It has functional features for messaging to individuals or teams, knowledge repository that is useful for administration of assessments, submission of requirements and posting of courseware, live polls and educational prompts, and streaming of live meetings with screen share and recording capabilities which are used in the conduct of interactive class discussions. Learning materials or courseware are made available to students through the MS Teams so they could access them every time, anytime and wherever intended.

The study aimed to assess whether the utilization of courseware through the MS Teams promotes self-directed learning thus guiding them to learn at their own pace, fosters favorable learning environment and aids in their learning growth.

1.1 Objectives

This study aimed to assess the impact on the utilization of courseware through MS Teams platform among the undergraduate students of Pangasinan State University along the following:

- a. Self-directed learning;
- b. Learning environment; and
- c. Learning growth.

2. Methods

Descriptive research design was applied in this study. According to Shona McCombes (2020), descriptive research aims to accurately and systematically describe a population, situation or phenomenon. Descriptive research was used as the researchers collected data was based on the stated variables in the objective through a quantitative research method that need to be organized, described and tabulated from the respondents.

3. Data Collection

The study covered nine (9) campuses (*Alaminos, Asingan, Bayambang, Binmaley, Infanta, San Carlos, Sta. Maria, Urdaneta, Lingayen*) of Pangasinan State University. Stratified random sampling technique was used in getting the sample size of the students to be surveyed. The data was gathered from five hundred (500) out of twenty-five thousand three hundred thirty-two (25, 332) enrollees of the University as sample size. The distribution of the respondents is shown in the table below.

Table 1. Distribution of Respondents of Impact Assessment on the Utilization of Courseware through MS Teams Platform of PSU Students

Campus (Respondents)	Total Number of Students	Sample Size
Alaminos	1,519	30
Asingan	921	18
Bayambang	5,058	100
Binmaley	1233	24
Infanta	453	9
Lingayen	6,388	126
San Carlos	3,978	79
Sta. Maria	1,539	30
Urdaneta	4,243	84
TOTAL	25,332	500

To determine the level of impact of courseware through MS Teams platform, each of the item of the questionnaire along the areas of self-directed learning, learning environment, and learning growth was analyzed and categorized using the 5-point Likert Scale where 5 is the highest having the descriptive equivalent of very high and 1, being the lowest with the descriptive equivalent of very low. The data was measured and analyzed by getting the weighted mean.

Point Score	Statistical Range	Descriptive Equivalent	Descriptive Interpretation
5	4.20 – 5.00	Very High	Impactful
4	3.40 – 4.19	High	Impactful
3	2.60 – 3.39	Moderate	Impactful
2	1.80 – 2.59	Low	Not Impactful
1	1.00 – 1.79	Very Low	Not Impactful

4. Results and Discussion

This section contains the presentation of survey results on the Impact on the Utilization of Courseware through MS Teams in the New Normal among PSU Students.

The survey instrument was adapted from SUMI by Veenendaal (1998), *Self-Directed Learning: A Four-Step Process* (Centre for Teaching Excellence, University of Waterloo), survey questionnaire developed by Verecio, R. (2014) which was modified by the researchers and validated by two (2) IT research experts.

The table 2 shows the Impact on the Utilization of Courseware in the New Normal among PSU students in terms of Self-Directed Learning variable with an overall weighted mean of 3.54 with the descriptive equivalent of “high”. The highest mean of 3.64 was computed in indicator 4 and interpreted as “high” which can be gleaned that the students was consulting their Instructor/Professor if there are lessons from the courseware that need clarification. This was followed by indicator 3 with the mean 3.63 indicating that the students design a plan of strategies for meeting learning needs. Indicator 2 has mean of 3.52 stating that the courseware helps them to learn the concept and principles of the lessons at their own rate. The mean of 3.49 was the result of indicator 1 which implies that they take the initiative regarding the content and sequence of learning based on the courseware where appropriate. The lowest mean was computed at indicator 5 with a mean of 3.42 interpreted as “high” which describes that the students are flexible enough in adapting and applying knowledge that they have learned. The results indicate that the PSU students are independent, strategic and flexible in learning through MS Teams using courseware in the new normal.

Table 2. Impact on the Utilization of Courseware in the New Normal among PSU Students in terms of Self-Directed Learning; n=500

Indicators	Mean	Description	Descriptive Equivalent Rating
1. Where appropriate, I take the initiative regarding the content and sequence of learning based on the courseware.	3.49	High	Impactful
2. The courseware helps me to learn the concept and principles of the lessons at my own rate.	3.52	High	Impactful
3. I design a plan of strategies for meeting learning needs (activities, assignments, quizzes, exams, etc.) systematically and sequentially.	3.63	High	Impactful
4. I consult my Instructor/Professor if there are lessons from the courseware that need clarification	3.64	High	Impactful
5. I am flexible enough in adapting and applying knowledge that I have learned.	3.42	High	Impactful
Overall Weighted Mean	3.54	High	Impactful

The table 3 shows the Impact on the Utilization of Courseware in the New Normal among PSU students in terms of Learning Environment variable with an overall weighted mean of 3.41 with the descriptive equivalent of “high”. The highest mean of 3.49 was tabulated in indicator 3 and interpreted as “high” which explains that the courseware is organized and easy to access through MS Teams with the use of any device. This was followed by indicator 1 with the mean 3.46 indicating that the MS Teams commands are easy to learn and operate. Indicator 4 and 5 has a mean of 3.40 stating that the students can communicate with their Instructors/ Professors comprehensively and they can submit activities/assignments quickly and smoothly. The lowest mean was computed from indicator 2 with a mean of 3.30 interpreted as “moderate” which describes that working with the MS Teams is mentally stimulating. The results indicates that the learning environment of MS Teams was usable, easy to use, effective and learning materials are organized.

Table 3. Impact on the Utilization of Courseware in the New Normal among PSU Students in terms of Learning Environment; n=500

Indicators	Mean	Description	Descriptive Equivalent Rating
1. It is easy to learn and operate the MS Teams commands.	3.46	High	Impactful
2. Working with the MS Teams is mentally stimulating.	3.30	Moderate	Impactful
3. The courseware is organized and easy to access through MS Teams with the use of any device (PC, tablet, smartphones).	3.49	High	Impactful
4. I can communicate with my Instructors/Professors comprehensively.	3.40	High	Impactful
5. I can submit activities/assignments quickly and smoothly.	3.40	High	Impactful
Overall Weighted Mean	3.41	High	Impactful

The table 4 shows the Impact on the Utilization of Courseware in the New Normal among PSU students in terms of Learning Growth variable with an overall weighted mean of 3.38 with the descriptive equivalent of “moderate”. The highest mean of 3.52 was computed in indicator 4 interpreted as “high” which explains that the students are encouraged to plan, monitor and evaluate their own cognitive skills. This was followed by indicator 2 with the mean 3.45 indicating that the MS Teams platform supports different strategies for learning growth. Indicator 3 has a mean of 3.40 stating that the courseware enhances the students’ skills, knowledge and abilities. The mean of 3.28 resulted from indicator 1 which implies that the learning growth manifests evidently through new normal modalities. The lowest mean was computed from indicator 5 with a mean of 3.25 interpreted as “moderate” which describes that there is enough time to learn their lessons in the new normal over face-to-face classes. The results indicate that the courseware utilized by the PSU students contributes to learning growth, enhanced their skills, knowledge and abilities and manifested enough time to learn their lessons over face-to-face classes.

Table 4. Impact on the Utilization of Courseware in the New Normal among PSU Students in terms of Learning Growth; n=500

Indicators	Mean	Description	Descriptive Equivalent Rating
1. Learning growth manifests evidently through new normal modalities.	3.28	Moderate	Impactful
2. The MS Teams platform supports different strategies for learning growth.	3.45	High	Impactful
3. The courseware enhances my skills, knowledge and abilities.	3.40	High	Impactful
4. I am encouraged to plan, monitor and evaluate my own cognitive skills.	3.52	High	Impactful
5. There is more time to learn my lessons in the new normal over face-to-face classes.	3.25	Moderate	Impactful
Overall Weighted Mean	3.38	Moderate	Impactful

The Table 5 presents the mean of each variable for impact assessment in terms of self-directed study, learning environment and learning growth variables. The self-directed variable garnered the highest mean at 3.54 while the lowest mean at 3.38 was computed from the learning growth variable.

Table 5. Summary on the Impact on the Utilization of Courseware in the New Normal among PSU Students; n=500

Variables	Mean	Description	Descriptive Equivalent Rating
Self-directed Learning	3.54	High	Impactful
Learning Environment	3.41	High	Impactful
Learning Growth	3.38	Moderate	Impactful
Grand Mean	3.44	High	Impactful

It can be gleaned that the Summary of Impact Assessment on the Utilization of Courseware in the New Normal among PSU students has a grand mean of 3.44 described as “high” and interpreted as “Impactful”. All variables of the impact assessment garnered a mean of 3.54, 3.41 and 3.38 which corresponds to descriptive equivalent of “high”, “high”, and “moderate”, respectively.

Based on the findings of the study, the courseware utilized by the PSU students through MS Teams motivates them to learn independently, enhanced their learning process and contributes learning growth in the new normal over face-to-face classes. However, it is interpreted that the Instructors or Professors need to maximize the use of courseware to improve learning process consistently through courseware in order to achieve higher level of learning growth.

This study is said to be congruent with Galy, E. (2011), Rahrouh, M. et al. (2018), Verecio, R. (2014), and Karajeh, W. et al. (2016). These emphasized that the use of e-learning tools captures student cognition and engages them in learning process via technology, while increasing their need for self-directedness or working independently. Moreover, students showed and maintained positive attitude towards using courseware and LMS, enhances learning process likewise contributes to the consistent improvement in the ability to define and measure students’ attainment of educational goals. Further, these highlighted that educators should continuously examine the effectiveness of their pedagogical strategies and smartly apply technologies to enhance students’ learning.

5. Conclusion

The results have shown that students who use the courseware provided to them by their instructors and professors through the MS Teams, regardless of program they are enrolled in, have raised self-directed learning as they could take initiative regarding the content and sequence of learning, learn their lessons effectively at their own pace, plan for strategies to meet their learning needs, communicate with their instructors and eventually adapt what they have learned.

The learning environment presented by the MS Teams as the school's learning management system also made the students' learning activities and goals be more achievable as it is easy for them to learn and operate the MS Teams commands for it is mentally stimulating. Likewise, the courseware is organized and easy to access.

The MS Teams promotes learning growth as manifested evidently through new normal modalities because it supports different strategies for learning growth. Further, the courseware enhances their skills, knowledge and abilities, allows them to plan, monitor and evaluate their own cognitive skills, and promotes self-paced learning as it can be utilized anytime, giving them more time for learning.

Finally, continuous improvement on the courseware is anticipated to provide better learning experience to students.

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Biography

Carla Carmela P. Perez is a College Instructor at Pangasinan State University, Lingayen Campus, Lingayen, Pangasinan, Philippines of the Information Technology (IT) Department, College of Computing Sciences for more than 7 years. She earned Bachelor of Science in Information and Communications Technology from Pangasinan State University, Urdaneta Campus, Urdaneta City, Philippines. Also, she graduated with a master's degree in Information Technology at Don Mariano Marcos Memorial State University, San Fernando City, La Union, Philippines. She is currently taking a Doctorate in Information Technology at University of the Cordilleras, Baguio City, Benguet, Philippines. She has taught courses in Application Development/ Thesis, Multimedia, Human-Computer Interaction, System Analysis and Design, Operating System and Database Management System. Ms. Perez was designated as Executive Secretary at her Campus in the year 2017-2019. Her first research was published at Global Researchers Journal in September 2017. She is a member of different IT organizations in the Philippines. Her research interests include Information Technology related such as Internet of Things, Impact of Technology, Augmented Reality, Decision Support System, Learning Management System and Big data among others.

Cristeta G. Tolentino holds a Bachelor of Science in Information Technology degree at AMA Computer College, Tarlac City, Philippines and Master of Science in Information Technology at Tarlac State University, Tarlac City, Philippines respectively. At present, she is an assistant professor at Pangasinan State University, Lingayen Campus, Lingayen, Pangasinan, Philippines of the Information Technology Department, College of Computing Sciences. She is now pursuing Doctor in Information Technology at University of the Cordilleras, Baguio City, Benguet, Philippines. She served as Department Chairperson of IT Department in her Campus in the year 2018-2020. She has taught courses, Web Development, System Analysis and Design, Application Development/Thesis, Operating System, Introduction to Computing, Electives among others. Moreover, she served as chair of the Research area of the IT program during the AACUP Accreditation. Her research interests include Data Analytics, Mobile Application Development, Decision Support System, so to speak.