

Attitudes of SDCA physical therapy students towards distance learning amidst the COVID-19 pandemic

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Abstract

The schools in the Philippines immediately shut down and started to shift to distance learning to prevent COVID-19 from quickly spreading. Distance learning had not experienced in Philippine education and most higher education institutions decided to move the school calendar due to the pandemic. This study aimed to: (a) determine the attitudes of physical therapy students in St. Dominic College of Asia towards distance learning during the COVID-19 outbreak; (b) find out the proficiency of the St. Dominic College of Asia academicians in the virtual learning environment; and (c) investigate if the school of St. Dominic College of Asia provides support to the needs of the students in virtual learning and other services. The study was conducted at St. Dominic College of Asia – Physical Therapy Department at Bacoor, Cavite. A total of 23 students participated. The Distance Learning Attitude Scale is used to measure the attitudes of students towards distance learning of physical therapy undergraduate students. The respondents show a positive attitude towards the proficiency of the academicians, course content, and the learning platform ($\mu = 2.28$). However, some of the respondents' moderately satisfied that they are getting a high quality of service. The attitudes of the students were highest from the third year level students, followed by the second, first, and fourth year levels. The distance learning scores of first and fourth year students are significantly higher than those of second and third year students. The therapy students of SDCA have a positive attitude towards distance learning. However, there are some categories that show the respondents are moderately satisfied with the school services such as the ICT department and student counseling services lack sufficient support for the distance education activities of the students. The distance learning attitude scale adaptation reliability has a Cronbach's alpha 0.9.

Keywords: *St. Dominic College of Asia; Physical therapy students; COVID-19; Attitudes towards distance learning.*

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Introduction

The educational system is greatly affected by the pandemic caused by SARs COV-2. The pandemic leads to a full closure of schools that force the students to study virtually (UNICEF Philippines, 2021). Based on the monitoring by United Nations Educational, Scientific and Cultural Organization (UNESCO), more than 100 countries have enforced the closure of both public and private schools that significantly affects nearly 90% of the students worldwide (UNESCO, 2020).

To continually provide education for the students, higher education institutions in the Philippines decided to adapt to the new situation where social interactions are not allowed. Schools shifted to electronic learning or e-learning where students and teachers had to use internet connections and devices such as laptops, personal computers, and mobile devices (Simbulan, 2020) as a channel of teaching, communication, and learning delivery (Dada et al., 2019). The advanced technology paved its way to the creation and enhancement of the Learning Management System (Raza et al., 2021) such as Canvas, Moodle, and Blackboard, and virtual meeting platforms such as Zoom, Google Hangouts, and Skype as learning strategies during the lockdown (Simbulan, 2020).

Electronic learning or e-learning was defined as the use of technology in any kind of learning (Dada et al., 2019). E-learning can benefit the students by its convenience and flexibility as they can manage their own time and pace as long as they are connected to the Internet. In addition to this, e-learning may also help the higher education institutions to “save substantial costs related to the investment in physical teaching and learning infrastructures” (Pham et al., 2019). Approach to online learning may occur in asynchronous, synchronous learning (Dada et al., 2019) and blended learning, using both asynchronous and synchronous as teaching mode (Yamagata-Lynch, 2014). Synchronous learning involves communication between the teacher and learners that runs in real-time such as in a face-to-face environment or via an online platform (Schoenfeld-Tacher & Dorman, 2021). Asynchronous learning can be compared to self-directed learning, in which the learning process happens based on the chosen time and location of the student (Dada et al., 2019). The combination of a traditional in-person class and synchronous or asynchronous class is called blended learning. Blended learning has increasingly gained popularity because of its effectiveness in health profession education (Liu et al., 2016). Based on the study conducted by Sáiz-Manzanares et al. (2020), blended learning done by combining face-to-face and online platforms yielded good results in the learning outcomes among nursing students. In addition to this, complementing synchronous and asynchronous classes, termed as bichronous online learning (Martin et al., 2020), may increase student learning outcomes, positive attitude, and retention provided that there is online flexibility (Yamagata-Lynch, 2014).

In the Philippines, the Bachelor of Science in Physical Therapy is a four (4)-year degree program that mostly includes general education and professional courses. Moreover, the course includes an internship program that involves designating students to different Commission on Higher Education (CHED) affiliation centers. Physical therapy students are exposed to different clinical settings as a fulfillment of the duties and responsibilities of a professional physical therapist (CHED Memorandum Article IV Section 5.2, 2017). Because of the COVID-19 pandemic, physical therapy students are obligated to learn clinical education, both the professional subjects and internship program, under virtual classes.

St. Dominic College of Asia provides faculty development, planning, and preparation for the learning platforms, such as Google Classroom and Blackboard, to be used in virtual classes among college students. Synchronous meetings are held via Zoom and/or Google Meet during the virtual class. For students who have unstable internet connections, professors are obliged to prepare course materials such as modules, recorded lectures, and video demonstrations. This teaching strategy is said to be beneficial and effective for the students during distance learning (Cuizon, 2021).

Although virtual learning may have a great potential to enhance the clinical competencies among health students, no research in the Philippines has been found that shows the acceptance and attitudes of physical therapy students towards virtual learning. Therefore, this study evaluated the impact of virtual learning on the attitudes of physical therapy students in St. Dominic College of Asia. This study will help the higher education institutions that offer allied health programs to determine the barriers and methods of effective teaching and learning. Specifically, this study aims:

1. To determine the attitudes of physical therapy students in St. Dominic College of Asia towards distance learning during the COVID-19 outbreak;
2. To find out the proficiency of St. Dominic College of Asia academicians in the virtual learning environment; and
3. To investigate if the school of St. Dominic College of Asia provides support to the needs of the students in virtual learning and other services.

Methodology

Participants

The researchers will conduct a survey for this study using the distance learning attitude scale. All 47 undergraduate students were invited to take part in this study; 5 (from 11) first-year students, 4 (from 9) second year students, 10 (from 15) third-year students, 4 (from 11) fourth-year students voluntarily participated in this study (Fig1)

Outcome assessment

The Distance Learning Attitude Scale is used to determine the attitudes towards distance learning of university students. The questionnaire classified four subdimensions: proficiency of the academician, course content, learning platform, and quality of service.

Answer options were categorized according to a 5-point Likert scale (strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree) and the results are presented as numbers and percentages. Students' attitudes towards distance learning were evaluated using a scale developed by Kurt and Özkan (2014).

Statistical Analysis

The obtained data were analyzed using Statistical Package for Social Sciences Software (SPSS) using descriptive statistics in the analysis of the descriptive characteristics of the students. Moreover, the gender and academic year (categorical variables) is represented as percentage (%) while the Distance Learning Attitude Scale data was calculated as frequency, absolute number (n), and percentage (%).

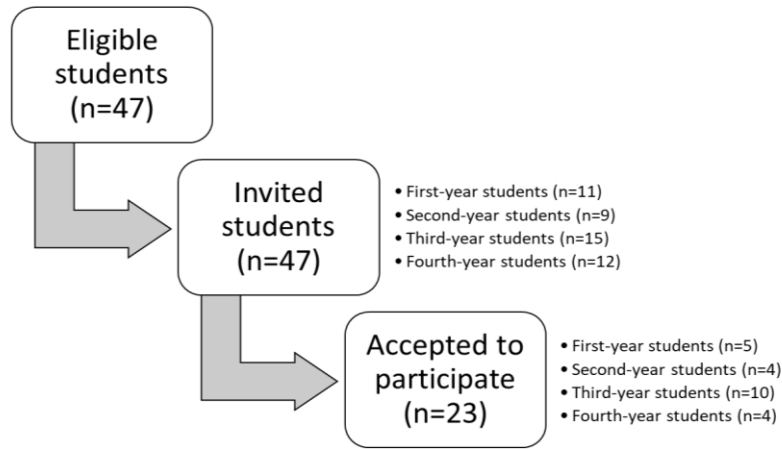


Figure 1. Flowchart of the study

Results

A total of 23 students (5 first year students, 4 second year students, 10 third year students, 4 fourth year students) voluntarily participated in the study. Among the participants, 16 (69.6%) were female and 7 (30.4%) were male. Descriptive characteristics of the students are shown in Table 1.

Table 1. Descriptive characteristics of students

Variable	N (%)
<i>Gender</i>	
Female	16 (69.6)
Male	7 (30.4)
<i>Academic Year</i>	
First	5 (21.7)
Second	4 (17.4)
Third	10 (43.5)
Fourth	4 (17.4)

Table 2 presents the summary of data collected on the distance learning scale that includes four subscales such as proficiency of the academician, course content, learning platforms, and quality of service.

Table 2. Attitudes towards distance learning

Statements	Strongly Agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)
Proficiency of the Academician					
Academicians are technically and academically ready for distance education courses.	3 (13.04%)	12 (52.17%)	6 (26.09%)	1 (4.35%)	1 (4.35%)
The proficiency of the academicians about the course is sufficient.	4 (17.39%)	11 (47.83%)	7 (30.44%)	1 (4.35%)	0 (0.00%)
The academicians give sufficient answers to the student questions along with the subject expression.	7 (30.44%)	8 (34.78%)	7 (30.44%)	1 (4.35%)	0 (0.00%)
Instead of explaining the whole course content, the academician focuses on the sections that are more difficult to understand.	6 (26.09%)	11 (47.83%)	6 (26.09%)	0 (0.00%)	0 (0.00%)
The academicians respond to the student's messages without delay.	6 (26.09%)	5 (21.74%)	9 (39.13%)	2 (8.70%)	1 (4.35%)
The answers given by the academicians to the student messages are satisfactory.	7 (30.44%)	6 (26.09%)	8 (34.78%)	2 (8.70%)	0 (0.00%)
The computer usage skills of the academician are sufficient.	3 (13.04%)	13 (56.52%)	6 (26.09%)	0 (0.00%)	1 (4.35%)
Course Content					
Course content is sufficient to understand the section.	7 (30.44%)	10 (43.48%)	6 (26.09%)	0 (0.00%)	0 (0.00%)
Rather than reading the course notes, watching distance education videos is sufficient to be successful.	6 (26.09%)	7 (30.44%)	7 (30.44%)	3 (13.04%)	0 (0.00%)
Learning Platform					
The learning platform, which includes schedule, course materials, and videos, is simple and understandable.	4 (17.39%)	16 (69.57%)	3 (13.04%)	0 (0.00%)	0 (0.00%)
The learning platform application screen is simple and useful.	5 (21.74%)	12 (52.15%)	6 (26.09%)	0 (0.00%)	0 (0.00%)
The smooth operation of the learning platforms has a positive effect of student success.	8 (34.78%)	9 (39.13%)	6 (26.09%)	0 (0.00%)	0 (0.00%)
Quality of Service					
The ICT Department provides sufficient support in distance education activities.	3 (13.04%)	4 (17.39%)	13 (56.52%)	2 (8.70%)	1 (4.35%)
The Student Counseling Unit (Department of student affairs and services) provides adequate support.	2 (8.70%)	6 (26.09%)	12 (52.15%)	2 (8.70%)	1 (4.35%)
The answers given by the staff to the emails of the students are solution oriented.	2 (8.70%)	8 (34.78%)	11 (47.83%)	0 (0.00%)	2 (8.70%)
All updates in the system are notified to students on time.	1 (4.35%)	9 (39.13%)	9 (39.13%)	4 (17.39%)	0 (0.00%)

Table 3. Scale statistics

Mean	Variance	Std. Deviation	N of Items
36.5652	79.893	8.9383	16

The collected data on the first subscale shows 52.2% of the participants 'Agree' that the academicians are prepared technically and academically for distance learning during the COVID-19 outbreak; 13% of the participants answered they 'Strongly Agree' and 26.1% of the participants

answered 'Neutral' (Std Dev 0.93, Mean 2.34, Range 1-4). However, 47.8% of the participants answered 'Agree,' 20.4% answered 'Neutral,' and 17.4% answered 'Strongly Agree' to the criteria that the academicians are proficient to the designated course (Std Dev 0.79, Mean 2.21, Range 3). Even though the academicians are ready for distance learning, only 30.4% answered 'Strongly Agree' to the statement that academicians give sufficient answers to the students' questions with regards to the subject matter. Less than half of the students strongly agree that the academicians are focused on the sections that are more difficult to understand (Std Dev 0.74, Mean 2, Range 2). Only 26.1% strongly agree that the student's messages are answered without delay (Std Dev 1.12, Mean 2.43, Range 4) while only 30.4% are strongly satisfied with the answers of the academicians. Moreover, the table shows that 56.5% of the participants answered 'Agree,' 26.1% answered Neutral, 13% 'Strongly Agree' that the computer usage skills of the academician are sufficient (Std Dev 0.86, Mean 2.26, Range 4).

In the course content subscale, the data shows that 43.5% of the participants 'Agree,' 30.4% 'Strongly Agree,' and 26.1% is 'Neutral' that the course content is sufficient to understand the section (Std Dev 0.76, Mean 1.95, Range 2). A total of 30.4% of the respondents answered they 'Agree,' 30.4% answered 'Neutral,' 26.1% 'Strongly Agree,' and 13% 'Disagree' that watching distance education videos is sufficient to be successful rather than reading the course notes (Std Dev 1.01, Mean 2.3, Range 3).

The learning platform subscale indicates that 69.6% of the participants answered 'Agree,' 17.4% 'Strongly Agree,' and 13% 'Neutral' that it is simple and understandable (Std Dev 0.56, Mean 1.95, Range 2); 52.2% of participants answered 'Agree,' 26.1% 'Neutral,' and 21.7% 'Strongly Agree' that the application screen is simple and useful (Std Dev 0.56, Mean 1.95, Range 2). Lastly, 39.1% of the respondents answered 'Agree,' 34.8% 'Strongly Agree,' and 26.1% 'Neutral' that the smooth operation of the learning platform has a positive effect on student success (Std Dev 0.79, Mean 1.91, Range 2).

Quality of service table shows that 56.5% of participants answered 'Neutral,' 17.4% 'Agree,' 13% 'Strongly Agree,' and 8.7% 'Disagree' that the ICT Department provides sufficient support in distance education activities (Std Dev 0.96, Mean 2.73, Range 4); 52.2% of participants answered 'Neutral,' 26.1% 'Agree,' and 8.7% both 'Strongly Agree' and 'Disagree' that the student counseling unit provides adequate support (Std Dev 0.95, Mean 2.73, Range 4); the table also indicates that 47.8% of the respondents answered 'Neutral,' 34.8% 'Agree,' and 8.7% both 'Strongly Agree' and 'Strongly Disagree' that the answers given by the staff to the emails of the students solution-oriented (Std Dev 0.98, Mean 2.65, Range 4). However, it shows that 39.1% of the respondents 'Agree' and are 'Neutral', while 17.4% 'Disagree' that all updated in the system are notified to students on time (Std Dev 0.82, Mean 2.69, Range 3).

Discussion

Due to the COVID-19, distance learning via synchronous and asynchronous classes have been the teaching-learning strategy among higher education institutions. In this study, the common challenges that the universities and academicians experiencing are fast transition from face-to-face to virtual learning platform. Moreover, virtual classes have become the new norm in the Philippines. There are many factors that need to be considered in carrying out the distance learning such as internet connectivity, gadgets, computer skills, environment, and support from the school.

Despite the changes, the undergraduate students of physical therapy in St. Dominic College of Asia had a positive attitude towards distance learning during the COVID-19 outbreak. For most students, the quality of the academicians and the course content are quite high and sufficient, especially at a higher year level due to their adaptability to the distance learning environment. In addition to this, asynchronous classes using modules, recorded lectures, and videos are helpful as an adjunct to the live lectures of the academicians provided that they are knowledgeable to operate the learning platform. Most of the students are also satisfied by the learning platform used in St. Dominic College of Asia because of its simplicity and usefulness to learning physical therapy skills and knowledge.

However, the school services such as the information and communication technology (ICT) department and student counseling services lack sufficient support for the distance education activities of the students. The proficiency of SDCA academicians in the virtual learning environment is adequate, since there are faculty development webinars held before the start of the semester. They also prepare recorded video lectures and modules for students who have issues in internet connection.

One of the school policies for online learning suggests limiting the screen time for two (2) hours in order to prevent overexposure to computer radiation. However, physical therapy subjects with three (3) units above consume almost 4-6 hours to complete one topic. The transition to online learning is difficult not only to the students but also to the academicians as they need to discuss the topic in a shortened period of time even if the course is a major subject. With this, it will greatly affect the knowledge and skills of the physical therapy students.

Google Chat and Facebook Messenger are the primary ways of the academicians to communicate with the students. The survey suggests that most of the students are slightly satisfied with how the academicians respond to their questions regarding the topic or other concerns.

Conclusion and Recommendations

Despite the challenges caused by the pandemic, the students should have adequate support, encouragement, and online communication for them to adapt easily to distance learning. The attitudes of the physical therapy students toward online learning are important to assess as it will greatly impact their learning process and acquisition. The researchers recommend that the number of participants should be expanded to accurately evaluate the effectiveness of virtual learning. Although there was a study on validity and reliability of distance learning scale in Turkey by Kurt and Özkan (2014 as cited in Şavkin et al., 2021), the researchers still recommend conducting further study on the reliability and responsiveness of the adaptation of the distance learning scale in the Philippine setting. In addition to this, different teaching strategies on improving clinical competencies and manual skills of physical therapy students during online class should be emphasized to determine the effectiveness of distance learning.

References

- Cuizon, P. C. (2021). Learning delivery modalities and academic performance at this time of pandemic among selected psychology students of St. Dominic College of Asia: A comparative study. *Journal of Social Transformation and Education*, 2(2), 87-96.
- Dada, E. G., Alkali, A. H., & Oyewola, D. O. (2019). An investigation into the effectiveness of asynchronous and synchronous e-learning mode on students' academic performance in National Open University (NOUN), Maiduguri Centre. *International Journal of Modern Education and Computer Science*, 10(5), 54-64.
- Kurt, N., & Özkan, Y. (2014). Factors affecting the academical success in distance education. *HAYEF: Journal of Education*, 11(2), 219-236. <https://www.hayefjournal.org/en/factors-affecting-the-academical-success-in-distance-education-16465>
- Licuanan, P. B. (2017, June 5). *Policies, standards and guidelines for the Bachelor of Science in Physical Therapy (BSPT) education* [Memorandum]. Commission on Higher Education. <https://chedro1.com/wp-content/uploads/2019/07/CMO-No.-55-Series-of-2017-Policies-Standards-and-Guidelines-for-the-Bachelor-of-Science-in-Physical-Therapy-BSPT-Education.pdf>
- Liu, Q., Peng, W., Zhang, F., Hu, R., Li, Y., & Yan, W. (2016). The effectiveness of blended learning in health professions: Systematic review and meta-analysis. *Journal of Medical Internet Research*, 18(1), e4807. <https://doi.org/10.2196/jmir.4807>
- Martin, F., Polly, D., & Ritzhaupt, A. (2020, September 8). *Bichronous online learning: Blending asynchronous and synchronous online learning*. EDUCAUSE Review. <https://er.educause.edu/articles/2020/9/bichronous-online-learning-blending-asynchronous-and-synchronous-online-learning>
- Pham, L., Limbu, Y. B., Bui, T. K., Nguyen, H. T., & Pham, H. T. (2019). Does e-learning service quality influence e-learning student satisfaction and loyalty? Evidence from Vietnam. *International Journal of Educational Technology in Higher Education*, 16(1), 7. <https://doi.org/10.1186/s41239-019-0136-3>
- Raza, S. A., Qazi, W., Khan, K. A., & Salam, J. (2021). Social isolation and acceptance of the learning management system (LMS) in the time of COVID-19 pandemic: An expansion of the UTAUT model. *Journal of Educational Computing Research*, 59(2), 183-208. <https://doi.org/10.1177/0735633120960421>
- Sáiz-Manzanares, M. C., Escolar-Llamazares, M. C., & Arnaiz González, Á. (2020). Effectiveness of blended learning in nursing education. *International Journal of Environmental Research and Public Health*, 17(5), 1589. <https://doi.org/10.3390/ijerph17051589>
- Şavkın, R., Bayrak, G., & Büker, N. (2021). Distance learning in the COVID-19 pandemic: Acceptance and attitudes of physical therapy and rehabilitation students in Turkey. *Rural and Remote Health*, 21(3), 6366. <https://doi.org/10.22605/rrh6366>
- Schoenfeld-Tacher, R. M., & Dorman, D. C. (2021). Effect of delivery format on student outcomes and perceptions of a veterinary medicine course: Synchronous versus asynchronous learning. *Veterinary Sciences*, 8(2), 13. <https://doi.org/10.3390/vetsci8020013>
- Simbulan, N. P. (2020, June 17). *The Philippines – COVID-19 and its impact on higher education in the Philippines*. The Head Foundation. <https://headfoundation.org/2020/06/04/covid-19-and-its-impact-on-higher-education-in-the-philippines/>
- UNICEF Philippines. (2021, August 25). *Filipino children continue missing education opportunities in another year of school closure*. <https://www.unicef.org/philippines/press-releases/filipino-children-continue-missing-education-opportunities-another-year-school>

- United Nations Educational, Scientific and Cultural Organization. (2020, March 24). *COVID-19 educational disruption and response*. <https://www.unesco.org/en/articles/covid-19-educational-disruption-and-response>
- Yamagata-Lynch, L. C. (2014). Blending online asynchronous and synchronous learning. *International Review of Research in Open and Distributed Learning*, 15(2), 189-212. <https://doi.org/10.19173/irrodl.v15i2.1778>