

*Research Article*

## Distance Learning and Sentiments of College Students on Class Practices, Content, and Teacher Character in a State University in the Philippines

MELANIE P. TOLENTINO<sup>1</sup>, JERICHO BELTRAN<sup>1</sup>, CRISMAR M. ESCOBIDO<sup>1</sup>,  
CHARIZZA VIANCA L. LIBUNAO<sup>1</sup>

<sup>1</sup>Central Luzon State University

Corresponding Author: [meltolentino@clsu.edu.ph](mailto:meltolentino@clsu.edu.ph)

### ABSTRACT

This describes the sentiments of students in various General Education courses delivered through online distance learning during the Covid-19 pandemic. A total of 1,356 students participated in an online survey at a state university in the Philippines. The keyword analysis using a word cloud generator was used for the qualitative responses. Results showed that a great majority (68%) were favorable to the online asynchronous delivery of lessons and some (32%) students expressed disagreement. Those who were favorable believe that online distance learning allows them to work at their own pace (57%). Those who disagreed expressed dissatisfaction due to the lack of discussions. The online class practice was the number one factor (f=763) considered when they reflect on their learning experience satisfaction followed by content lesson (f=303), and lastly is the teacher character (f=121). Word cloud generator revealed the dominant keywords that describe the student's satisfaction with online class practices - videos, activities, fair grading, discussions, and complete modules. In content, the keywords include critical thinking, understanding, importance, awareness, issues, social, and economy. The teacher characteristics favored by the students were considerate, approachable, communicative, knowledgeable, and competent. Meanwhile, the major reasons for dissatisfaction include many readings, many activities, lack of instructions, lack of interactions, and difficulty. This study showed the

positive aspects of online distance learning. However, the lack of proper guidance and insightful discussions from the professors makes the online tasks difficult leaving the students thirsty for academic socialization.

**Keywords:** distance learning, online asynchronous, Covid-19 pandemic, learning experiences, Philippines

## INTRODUCTION

Schools and universities across the world went on closure for several months in 2020 due to the public health concerns of the Covid-19 pandemic. The Philippines had recorded the longest school lockdown of 29 months. The fear of being exposed to the virus and the public awareness of the low capacity of public health institutions had kept the students and parents silent about their anxiety about the disruption in learning. The long school lockdowns were feared to worsen basic literacy standards among elementary-level students and limit skills preparation to the labor force among college students (Lopez, 2022). Measures to mitigate the situation were implemented such as distance learning in various approaches from basic to tertiary school levels. State universities, challenged by limited funds, had utilized Google classroom as the online learning management system. Google Classroom is a free application designed to help students and teachers to share the learning materials such as articles, and videos, communicate with students, and make assignments in paperless form (Pappas, 2015). However, the effectiveness of this distance learning platform relied heavily on several factors that include the technical knowledge and skill of teachers, availability, and access of students and teachers to an internet connection, and available computer gadgets at home. There are also reports of social and psychological struggles such as increased stress levels (Maulana, 2021), anxiety, and boredom (Irawan et al., 2020) brought by distance learning during the Covid-19 school closures.

One of the primary concerns of state universities during the Covid-19 closures was the delivery of General Education (GE) courses to the total student population. The GE curriculum is common to all undergraduate students regardless of their major and aims to expose the students to learning processes that develop intellectual competencies and civic capacities (CHED Memorandum Order No. 20 Series 2013). The efficient and effective learning experience even in the distance learning mode is important in preparing college students to be analytical, values-oriented, civic-minded, and global citizens.

This study evaluates the satisfaction of students on the distance learning of GE curriculum in the field of Social Sciences with the following objectives: 1) determine the levels of satisfaction of students in terms of learning outcomes, teaching techniques, and assessment, and teacher competence, 2) determine the sentiments of students on distance learning, 3) identify lessons learned and their application in the new normal.

## **Review of Related Literature**

### *Learning outcomes, strategies, and teacher roles in distance learning*

The course structure is key to the student's interest and satisfaction. In the study, Baber (2020), suggested that a modification of the course structure shall be made in order to cope with the changing realities of the pandemic. Brophy, et. al. (2021) suggested the development of an Online Supportive Course Design (OSCD) in order to ensure a smooth transition to the remote learning environment. This design puts an emphasis on the course elements that support the easier transition from traditional face-to-face learning to emergency remote teaching. According to Jaggars and Xu (2016), there are four factors related to the success of online learning: organization and presentation, learning objectives and assessment, interpersonal interaction, and use of technology. One of the features of online distance learning is the easy availability of journal articles and reading materials for students. However, one of the major concerns is the struggle to understand the modules and materials. Lishar et al., (2021) believe that to better achieve the learning outcomes in every material, the teacher should utilize effective ways of introducing materials for the students so they could easily understand the material.

In terms of teaching strategies, the use of technology became significantly important in teaching and learning during the pandemic. Technology improves the efficiency of teaching and develops an easier mode to give instruction, give feedback, test, and collaborative learning (Ginkel et al., 2020). Among the teaching strategies used, utilizing video lessons is the most effective method of teaching strategy (Dudnik et al., 2020) and should be utilized most of the time in order to ensure the installed competencies of students. The study of Bilushchaka and Bratus (2021) highlighted that utilizing video materials as instructional materials is favorable to students in Ukraine. More than 7 of 10 students prefer to have a video lecture on the materials they are studying. The students also believe that this makes their studies easier. However, in spite of the effectiveness of video lessons, students perceive this strategy as inefficient due to the cost needed (Ayuandiani et al., n.d.).

Teachers' role in this set-up is also vital; they are both a designer and facilitators of the course (Baber, 2020 as cited in Martin, Wang, & Sadaf, 2018). According to Chu et al., (2021), instructors who played both formal and informal roles of being teachers help students develop positive learning outcomes. It is perceived that students appreciate the friendly and accommodating characteristics of teachers. Lectures delivered by teachers online also provide personal time and communication to the students to ensure that students will be easily aware of the new method of learning (Dhawan, 2020, as cited in Badyalina, Majid, & Ramli, 2020).

### *Challenges and coping mechanisms in distance learning*

In the Philippines, the greatest challenge of the emergency transition from face-to-face learning to distance learning is the poor learning environment at home while the least is technological literacy and competency (Barrot et al., 2021). In

addition to this, distance learning also impacted the students' mental health and quality of learning experience. Procrastination and online multitasking are also among the challenges, in addition to poor internet facility support, that was mentioned in the study by Lao et al., (2021) among future language educators.

Given the challenges mentioned above, various literature has delved into the coping mechanisms of students in distance learning ( Daraman & Decano, 2021; Barcenar & Bibon, 2021; Rotas & Cahapay, 2021). Avoidant coping behaviors were reflected in the study of Darama and Decano (2021) where students resort to distractive behaviors such as listening to music, watching movies, going to the mall, crying, and praying to cope with stress (Rotas & Cahapay, 2021). Students also deal with the distance learning challenges by active coping. They try to resolve the concerns by asking for social support from family, and friends, (Rotas & Cahapay, 2021; Pastor et al., 2022), cheating through independent internet learning and consulting knowledgeable people (Barcenar & Bibon, 2021). Espiritu, et al. (2022) conducted a phenomenological qualitative study that explored the lived experiences of six college students in Davao De Oro, Philippines. Results showed that the students organize and manage their time, duties, and task properly by prioritizing their tasks according to their due dates. They always contact their teacher, especially whenever there is confusion regarding with specific topic. Chandra (2021), in addition, found out that students cope with the stress in the academe during distance learning by engaging in some activities like they started to find out their new skills, hobbies, and talents. Moreover, they engaged to work with some companies that help them to improve their skills and talents.

These studies show the broad range of changes and sentiments inflicted by the emergency transition to distance online learning. These bring important lessons that can be potential measures to bring innovation to learning in the new normal.

## **METHODOLOGY**

### **Design**

The study used a mixed-method approach in collecting and interpreting data. Due to limited mobility, the data collection was conducted through an online survey. Three follow-up focus group discussions were conducted among students who were allowed to have limited face-to-face classes during the first-semester re-opening of a state university.

### **Participants and Sampling**

A total of 1,356 non-randomly selected student-respondents who were enrolled in GE courses (Ethics, The Contemporary World, Readings in Philippine History, and Gender and Society) answered the survey questionnaire. The respondents were under various curricular programs in a state university during the First Semester (August to December) of 2021-2022. Meanwhile, the FGD

participants were at the second-year level of the Social Sciences Curriculum. Each FGD was composed of 10 to 15 members.

**Data Analysis**

The quantitative data collected through the survey was analyzed using descriptive statistics. A keyword generator was used to analyze the qualitative responses in the survey. On the other hand, the transcript from FGD was analyzed using thematic analysis.

**RESULTS AND DISCUSSION**

*Profile of the Respondents*

Among the total respondents of 1,356 students who participated in the online survey, 31.71% were male, 67.99% were female, and .29% identified themselves as members of LGBTQ. The mean age of the respondents is 19.3 years (M=19.3) with a standard deviation of 1.36 (SD=1.36). All of the respondents were enrolled in different GE courses in the Social Sciences domain: 33.18% were enrolled in The Contemporary World; 30.38% in Ethics; 29.79% in Readings in Philippine History; 6.19% in Gender and Society, and only very few were enrolled in the Life and Works of Jose Rizal. (Table 1)

Table 1 *Profile of the Respondents*

|                                | <b>f</b>    | <b>%</b>  |
|--------------------------------|-------------|-----------|
| <b>Gender</b>                  |             |           |
| Male                           | 430         | 31.71     |
| Female                         | 922         | 67.99     |
| Gay                            | 3           | 0.22      |
| Bisexual                       | 1           | 0.07      |
| <b>Subject Enrolled</b>        |             |           |
| The Contemporary World         | 450         | 33.18     |
| Ethics                         | 412         | 30.38     |
| Gender and Society             | 84          | 6.19      |
| Readings in Philippine History | 404         | 29.79     |
| Life and Works of Jose Rizal   | 6           | 0.44      |
|                                | <b>Mean</b> | <b>SD</b> |
| <b>Age</b>                     | 19.3        | 1.36      |

*Satisfaction of Students in the Distance Learning*

The satisfaction of students in the distance learning of GE courses during the university closure was determined in three components: course content or learning outcomes, practices or teaching techniques and assessment, and teacher role or teacher’s competency (Table 2).

*Table 2 Level of Satisfaction with GE Courses in Distance Learning*

| <b>Variables</b>  | <b>Mean</b> | <b>Standard Deviation</b> | <b>Qualitative Description</b> |
|---|-------------|---------------------------|--------------------------------|
| <b>Satisfaction in Learning Outcomes</b>                    | <b>3.24</b> | <b>0.5</b>                | <b>Moderately Satisfied</b>    |
| Learning outcomes were clearly stated                       | 3.32        | 0.01                      | Highly Satisfied               |
| Learning outcomes were met                                  | 3.22        | 0.02                      | Moderately Satisfied           |
| Learning outcomes guided students                           | 3.24        | 0.02                      | Moderately Satisfied           |
| Learning outcomes made clear the standard of work           | 3.24        | 0.02                      | Moderately Satisfied           |
| Learning outcomes met the expectation of students           | 3.19        | 0.02                      | Moderately Satisfied           |
| <b>Satisfaction with Teaching Techniques and Assessment</b> | <b>3.29</b> | <b>0.5</b>                | <b>Highly Satisfied</b>        |
| Teaching techniques are helpful for a learning experience   | 3.23        | 0.02                      | Moderately Satisfied           |
| Teaching techniques are appropriate for the subject matter  | 3.29        | 0.02                      | Highly Satisfied               |
| Teaching techniques encourage students to think critically  | 3.33        | 0.02                      | Highly Satisfied               |
| Teaching techniques foster participation                    | 3.18        | 0.02                      | Moderately Satisfied           |
| Assessment of the use of relevant materials                 | 3.34        | 0.02                      | Highly Satisfied               |

|   |             |            |                         |
|---|-------------|------------|-------------------------|
| Clear assessment criteria                         | 3.30        | 0.02       | Highly Satisfied        |
| Assessment of honest grading system               | 3.41        | 0.02       | Highly Satisfied        |
| <b>Satisfaction in Teacher’s Competence</b>       | <b>3.42</b> | <b>0.5</b> | <b>Highly Satisfied</b> |
| Teachers have a full grasp and deep knowledge     | 3.48        | 0.02       | Highly Satisfied        |
| Teachers connect concepts and theories to reality | 3.47        | 0.02       | Highly Satisfied        |
| Teacher’s explanation with clarity                | 3.35        | 0.02       | Highly Satisfied        |
| Teachers encourage participation                  | 3.39        | 0.02       | Highly Satisfied        |
| Teachers are prepared and confident               | 3.43        | 0.02       | Highly Satisfied        |
| <b>Overall Mean</b>                               | <b>3.32</b> |            | <b>Highly Satisfied</b> |

*\*1.00-1.74 Not Satisfied; 1.75-2.49 Partially Satisfied; 2.50-3.24 Moderately Satisfied; 3.25-4.00 Highly Satisfied*

The satisfaction with the delivered course content in GE subjects during the distance online learning was evaluated based on the achievement of learning outcomes specified on each GE course. The learning outcomes vary in every GE course since they describe the skills, knowledge, and values that students should be able to demonstrate after completing the course. The students were moderately satisfied with the learning outcomes of their GE courses during the distance learning (M=3.24; SD=.05). This means that the majority of the student-respondents agree that course content – knowledge, values, and skills stated at the beginning of the semester were achieved. Based on the results of the keyword generator of the students' qualitative answers to the question, "What are the knowledge, values, skills you have achieved from the (title of a GE course)?", the dominant keywords were critical thinking, understanding, importance, awareness, issues, social, and economy (Figure 1). Seemingly the students have imbibed the purpose of the GE course, which is to be analytical, values-oriented, civic-minded, and global citizens.



Figure 1. Keywords generated on reasons of student's satisfaction with content.

In terms of the student's satisfaction with practices or teaching techniques and assessment in distance learning, the rating was highly satisfied (M=3.29; SD=0.5). This means that the majority of the student-respondents strongly agreed that the teaching techniques and evaluation tools used in their GE google classrooms were appropriate and efficient to their context of learning at home. The top reason for their satisfaction in this domain is the honest grading system (M=3.41; SD=0.02). This may be attributed to the feature of google classroom that enables the students to view their points earned in every task assigned by their instructor. The keyword generator revealed the reasons why they were highly satisfied with the distance online learning that include videos, activities, fair grading, discussions, asynchronous, and complete modules.

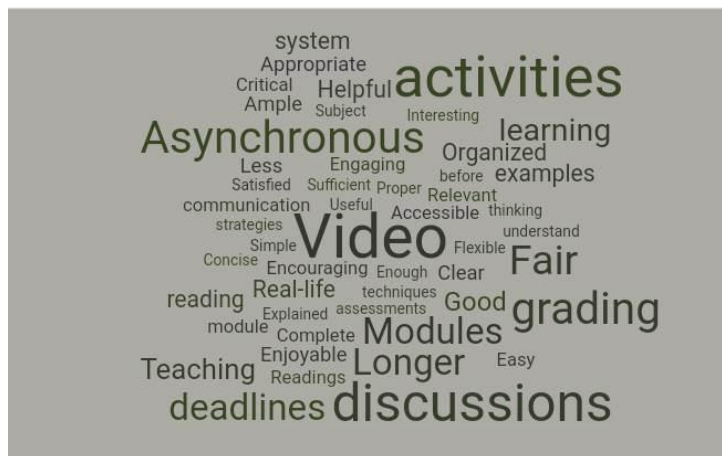


Figure 2. Keywords generated on reasons for student's satisfaction with distance learning practices.



The satisfaction in teacher competency was highly rated by the students' respondents with a mean score of 3.42 (M=3.42; SD=.5). The satisfaction of students in teacher competency or character was measured based on the exhibited mastery of the teacher in the GE course, ability to show the relevance of concepts in the real world, and ability to encourage the participation of students. Based on the results of the keyword generator, the students were highly satisfied based on the specific teacher characteristics: considerate, approachable, communicative, knowledgeable, and competent (Figure 3).

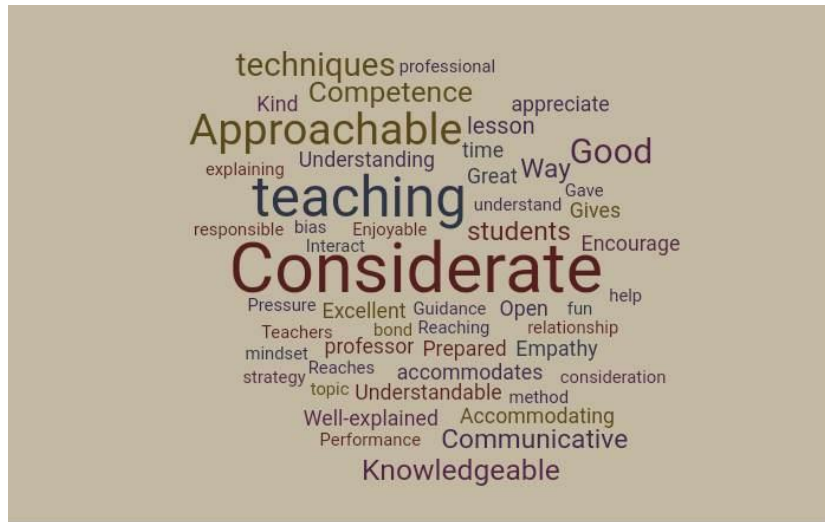


Figure 3. Keywords generated on student's satisfaction in teacher character on distance learning.

### *Sentiments of Students on Distance Learning*

Table 3 shows the sentiments of student respondents on distance learning based on their experience in their respective GE courses. A great majority (68.36%) of the student-respondents had expressed approval with asynchronous while some (31.63%) expressed disapproval. Most of the student respondents (83.50%) believe that distance learning in asynchronous mode is appropriate because they can work at their own pace. Few (14.35%) of those who approve of the asynchronous mode believe that it is applicable to students with limited internet access. Only less than 10% cited other reasons: can do assigned work off-line (2.16%), economical (.32%), and others (2.59%). Meanwhile, most (89.04%) of those who disapprove the distance learning, asynchronous mode, believe that it is lacking in discussions. Other reasons for disapproval include limited opportunities to ask questions (9.79%), too many requirements (6.06%), and unclear instructions (4.42)%.

Table 3 *Sentiments of Students on Distance Online Learning*

| <b>The Sentiment of Students to Distance Learning</b>       | <b>f</b> | <b>%</b> |
|---|----------|----------|
| <b>Agree with the asynchronous mode of learning</b>         |          |          |
| Yes   | 927      | 68.36    |
| No  | 429      | 31.63    |
| <b>Asynchronous mode is appropriate</b>                     |          |          |
| I can do my assigned work off-line                          | 20       | 2.16     |
| It allows me to work at my own pace.                        | 774      | 83.50    |
| It is best for students with limited access to the internet | 133      | 14.35    |
| It is economical  | 3        | .32      |
| Others  | 24       | 2.59     |
| <b>Asynchronous mode is not appropriate</b>                 |          |          |
| Lack of discussions   | 382      | 89.04    |
| Limited opportunities to ask questions                      | 42       | 9.79     |
| Too many requirements                                       | 26       | 6.06     |
| Unclear instructions  | 19       | 4.42     |
| Others  | 41       | 9.56     |



were among the reasons. According to Ku, Tseng, and Akarasriworn (2013) and Moore (2002), interaction among students and between students-teachers plays an important role in learning outcomes. Moreover, the lack of clear instructions in google classroom for activities and limited guidance from a teacher also contribute to inadequate learning outcomes. This is supported by the study of Baber (2020) which emphasized facilitation as crucial to the learning experience of students in online learning. In spite of the low moderate learning outcomes satisfaction, students claimed they gained understanding - “the lessons gave us understanding how global societies work”, ability to identify gender theories and relate it to current social issues – “(can) tackle social issues with gender perspectives, application of ethics in learning and reasoning - “positive impact on ethical awareness, knowledge, and reasoning readings”, and gain of historical sense – “realization of the (importance of) past events”.

The student respondents were highly satisfied with the use of technology in asynchronous online learning. Utilizing videos in lessons was the most dominant reason why students appreciate distance learning. This confirms the studies that video lessons were the most effective learning strategy in distance learning (Dudnik et al., 2020; Bilushchaka & Bratus, 2021). Video lessons or instructions are more engaging than pure text instruction materials uploaded in google classroom. It captures the students' attention, improves their comprehension of the topic, and enhances the teacher-student relationship, “the modules are well presented and the video materials help a lot to understand the given lesson (and) it has enough allotted time to read and analyze the readings”. It is worth noting that another characteristic of asynchronous classes, which the students highly appreciate, is the transparency of points earned in every task posted in their Google classes. Students were highly satisfied when the assessment was clear, which they interpret as honest and fair. Another way of putting this is the relevance of feedback on the student's assigned tasks (Foerderer et al., 2021).

The competency of teachers handling the GE courses was highly appreciated. But more than the mastery of the subject matter being taught, the interpersonal relations of students to their teacher matter the most – considerate, approachable, and can easily communicate with, “I appreciate the most how our Professor understands and accommodate us whenever we clarify about our activities”. Teacher-student relationships create a thriving environment not only in face-to-face classes but more significantly in distance learning especially among students in the young cohort. Students show better academic performance and social-emotional skills in class when they have positive student-teacher relations (Cristine et al., 2022).

Given the lessons learned from the experiences of students in distance learning during Covid-19, it is worth exploring possible innovations to improve the learning experiences of students in the new normal. In improving the learning outcomes of students, engage the students in setting the expectations in class. Considering the GE courses are aimed to mold the student's analytical skills and

social consciousness, solicit their views on their pandemic experience to incorporate into the learning outcomes. Maintaining an online platform for learning materials and videos could facilitate a better learning experience among the students even if the university shifts to a full face-to-face classroom setting. This will allow students to maximize time in their studies. However, a proper introduction to materials should be incorporated to guide the students and entice their interest in every lesson. Learning in a face-to-face classroom can reach its best potential when utilized for discussions and interactions among students and teachers. This is to allow the returning students from the remote mode of learning to catch up in socialization and build mutual respect for both student and teacher.

This study has some limitations that should be taken into account. The learning experiences described are based on asynchronous online learning. The findings cannot be generalized as a description of experiences in distance learning in its broad sense. The evaluation of the satisfaction of students with GE Social Science courses during the pandemic was conducted in only one state university in the Philippines. The learning outcomes, strategies, and teacher roles or competencies were based on the observation of respondents to their respective GE course instructors. And lastly, there are no available evaluation findings of satisfaction of students to GE courses in the traditional mode of learning; hence, we cannot make conclusive remarks on the effectiveness or ineffectiveness of asynchronous classes compared to face-to-face classes.

## **CONCLUSION**

The interaction was found to be the missing ingredient in the learning experience of students in distance learning asynchronous mode. Even if they were highly satisfied with the shifting of how the course content was delivered, the lack of discussions, guidance, and communication with their teacher inhibit them from achieving the learning outcomes of their GE courses. Nevertheless, the closure of schools opened the realization of the importance of technology to learning. Online learning materials such as videos and e-modules were highly appreciated; hence, these LMS could be maintained to help the students thrive in their studies and practice discipline by studying at their own pace. University administrators may also practice innovative approaches in addressing the problem of limited classrooms in state universities by implementing few online asynchronous classes. However, this can only be effective if the issues identified in this study will be addressed to improve the learning experiences of students.

## REFERENCES

- Ayuandiani, W., Bahasoan, A., Mukhram, M., & Rahmat, A. (n.d.). Effectiveness of Online Learning In Pandemic Covid-19. *International Journal Of Science, Technology & Management*. 100-106.
- Baber, H. (2020). Determinants of Students' Perceived Learning Outcome and Satisfaction in Online Learning during the Pandemic of COVID19. *Journal of Education and e- Learning Research*, 7(3): 285-292.
- Badyalina, B., Majid, M., Ramli, M. (2020). Impeding Factors Towards the Effectiveness of Online Learning During Covid-19 Pandemic among Social Sciences Students. *International Journal of Learning and Development*. 10(4), 37-49.
- Barrot, J. S., Llenares, I. I., & Del Rosario, L. S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies*, 26(6), 7321-7338.
- Bilushchaka, T. & Bratus, I. (2021). Teaching in the Internet Environment Against the Background of COVID-19: Integration of Video Content into E-Learning. *International Conference on Computational Linguistics and Intelligent Systems*.
- Brophy, N., Broeckelman-Post, M., Buehl, M., Miller, A., Nordin K., & Vomound, J. (2021). Pandemic Pedagogy: Elements of Online Supportive Course Design. *Journal of Communication Pedagogy*. 5, 95-114.
- Chandra, T.D., Lestari, A. S. B., Nusantara, T., & Indrawatiningsih, N. (2021). Covid-19: The effects of distance learning in Indonesia based on a commognitive perspective. *Indian Journal of Forensic Medicine & Toxicology*, 15(3), 1883-1888.
- Chu, A., Chong, A., Lam, B., & Tsang, J. (2021). Higher Education during the Pandemic: The Predictive Factors Of Learning Effectiveness in COVID-19 Online Learning. *Education sciences*. 11, 446.
- Coristine, S., Russo, S., Fitzmorris, R., Beninato, P., & Rivolta, G. (2022, April 1). The importance of student-teacher relationships. *Classroom Practice in 2022*. URL: <https://ecampusontario.pressbooks.pub/educ5202/chapter/the-importance-of-student-teacher-relationships/>
- Daraman, S.M. & Decano, R.S. (2021). Stressors and coping strategies on distance learning among education students. *International Journal of Environmental Economics, Commerce, and Education Management*, 8(11), 1-12.
- Decano, R., Tiboron, G., & Buladaco, M. (2021). Procrastination attitude of the senior high school students in modular distance learning modality. *International Journal of Research and Innovation in Social Science*, 5(6), 2454-6186.
- Dudnik, O., Gardanova, Z., Ponkratov, V., Kuznetsov, N., Nikitina, N., Latypova, N., & Shcherbatykh, S. (2020). A Model for Optimizing the Structure of Teaching Techniques for Distance Learning in the Russian Higher Education System. *Journal of Open Innovation: Technology, Market, and Complexity*. 6, 107.

Foerderer, M., Hoffman, S., Schneider, N., Prichard, J.R. (2021, April 27). *Predicting Levels of Student Satisfaction during Covid-19*. EDUCAUSE Research Notes. <https://er.educause.edu/articles/2021/4/predicting-levels-of-student-satisfaction-during-covid-19>

Gickel, S., Noroozi, O., Schuurink, E. & Spoel, I. (2020). Teachers' online teaching expectations and experiences during the Covid19-Pandemic in the Netherlands. *European Journal of Teacher Education*. 43(4), 623-638.

Irawan, A. W., Dwisona, D., & Lestari, M. (2020). Psychological impacts of students on online learning during the pandemic COVID-19. *KONSELI: Jurnal Bimbingan dan Konseling (E-Journal)*, 7(1), 53-60.

Ku, H. Y., Tseng, H. W., & Akarasriworn, C. (2013). Collaboration factors, teamwork satisfaction, and student attitudes toward online collaborative learning. *Computers in human Behavior*, 29(3), 922-929.

Lao, K. A. C., Lao, H. A., Pulalon, M. K., & Ramos, M. S. Y. H. (2021). When classrooms become virtual: Challenges and coping mechanisms of prospective teachers. *The Asian ESP Journal*, 17(6), 65-93.

Lishar, S., Perwita, D., & Wulandari, S. (2021). The Effect Of Learning Facilities, Teacher Competency And Learning Motivation of The Student Understanding On Online Learning In The Covid-19 Pandemic. *International Sustainable Competitiveness Advantage*. 574-585.

Lopez, D. (2022, August 12). Years of Covid school closures leave Philippines with deep scars. Retrieved from Bloomberg: <https://www.bloomberg.com/news/articles/2022-08-11/years-long-school-closure-to-scar-philippines-long-after-it-ends>

Maulana, H. (2021). Psychological impact of online learning during the COVID-19 pandemic: a case study on vocational higher education. *Indonesian Journal of Learning Education and Counseling*, 3(2), 130-139.

Moore, M. G. (2002). Editorial, what does research say about the learners using computer-mediated communication in distance learning?. *The American Journal of Distance Education*, 16(2), 61-64.

Pappas, C. (2015, May 3). Google Classroom: A Free Learning Management System For eLearning. Retrieved from eLearning Industry: <https://elearningindustry.com/google-classroom-a-free-learning-management-system-for-elearning>

Rotas, E., & Cahapay, M. (2020). Difficulties in remote learning: Voices of Philippine university students in the wake of COVID-19 crisis. *Asian Journal of Distance Education*, 15(2), 147-158.