Determinants of Zoom Fatigue Among Graduate Students of Teacher Education Program

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Rome B. Moralista[1], Ryan Michael F. Oducado[2(✉)], Baby Rose G. Robles[2], Daisy A. Rosano[2]
[1] Guimaras State College, Buenavista, Guimaras, Philippines
[2] West Visayas State University, Iloilo City, Philippines
rmoducado@wvsu.edu.ph

Abstract—Videoconference applications gained popularity when online learning became the new way of delivering instruction at all levels of education including graduate programs. However, excessive videoconferencing led to reports of fatigue among its users. Identifying the factors contributing to the videoconference exhaustion experience of graduate students is necessary. This study examined Zoom fatigue and selected associated factors among graduate students. An electronic one-shot survey using the Zoom Exhaustion and Fatigue scale was conducted among 109 graduate students of the College of Teacher Education in the Philippines. Correlation and predictive analysis were performed. Results of the study demonstrated a moderate level of Zoom fatigue with the highest level of fatigue in the general fatigue dimension. Pearson's correlation analysis revealed a significant inverse correlation between attitude toward videoconferencing and Zoom fatigue. Non-verbal mechanisms of mirror anxiety, feeling physically trapped, hyper gaze, and cognitive load in producing non-verbal cues were significantly positively related to Zoom fatigue. Regression analysis revealed that the sense of being physically trapped and cognitive load in producing non-verbal cues remained significant predictors of Zoom fatigue. While videoconferencing supported educational activities and made schooling possible during the global disease outbreak, it is recommended to be mindful of the non-verbal factors contributing to Zoom fatigue.

Keywords—graduate students, teacher education, videoconferencing, Zoom fatigue

1 Introduction

Recently, there has been a growing recognition and usage of virtual distance education and remote learning [1]. The rapid transition to online learning in all levels of education, including the graduate program during the global coronavirus disease outbreak, resulted in a boom in videoconference applications use [2, 3]. It has been observed that participants of videoconference tools like Zoom increased by 2900 percent during the global outbreak of coronavirus disease [4]. Zoom was one of the

fastest-growing and leading videoconferencing software during the pandemic because it was free and easy to use [4, 5].

Videoconferencing applications have many advantages and have been an essential tool for work, school, and social interaction because of their ability to resemble face-to-face conversations seamlessly [5, 6]. Videoconferencing permits participants from different places to participate in live audio-visual communication and collaboration [7]. However, like any technology, there are also concerns about videoconferencing tools [5, 8]. Because of the rapid transition to the new platform, many universities focused on the technical aspect of technology and did not give attention to the basic understanding of the pedagogy in this new learning space [9]. A new phenomenon of feeling tired and exhausted during virtual meetings of spending hours on video chat platforms dubbed as Zoom fatigue began to emerge [6, 10]. Zoom fatigue is posited as part of a larger experience of exhaustion with computer-mediated communication [11]. And given the Zoom application has become a very common videoconferencing software, it has been used to replace videoconferencing. However, it must be noted that Zoom fatigue is synonymous with videoconferencing fatigue or exhaustion experienced with any videoconferencing software [5, 10].

Meanwhile, there is also a growing body of evidence on Zoom meetings' likely negative physical and psychological consequences [12-15]. Overuse of technology has resulted in technostress affecting physical and mental health [16]. Several reasons have been hypothesized why videoconferencing applications are said to be more psychologically demanding. These include the novel experience of the very close proximity to facial images and a greater need to concentrate during video calls [17]. For Stanford University researchers, they hypothesized that non-verbal mechanisms specific to videoconference use contribute to fatigue with Zooming [5, 18]. Personal, organizational, technological, and environmental factors have also been identified as possible causes of fatigue during videoconferencing [7].

Given that this new phenomenon appeared only recently with the pandemic and early research on Zoom fatigue mainly was conducted abroad, there is growing research regarding the exhaustion that is linked with virtual meetings. There is a need to explore Zoom fatigue in the educational context, particularly among graduate students, as online remote learning is likely to play a substantial role in teaching and learning beyond the pandemic [2, 19]. Evidence shows that students find it harder to focus and are often less responsive during online synchronous Zoom classes, which undesirably affects the nonverbal dynamics in online courses [20]. Identifying and addressing the factors contributing to the videoconference exhaustion and fatigue experience of graduate students is necessary. This study determined the level of Zoom fatigue among graduate students in the Philippines. This study also tried to examine if attitude toward virtual meetings and non-verbal factors are significantly associated with Zoom fatigue in the context of graduate teacher education.

2 Methods

2.1 Research design, participants, and data gathering

We used a quantitative, cross-sectional research design for this study. A-priori sample size calculator for multiple regression was utilized to determine the minimum required sample size (n=97) for a multiple regression study given .05 desired probability level, 6 number of predictors in the model, .15 anticipated effect size, and 80% desired statistical power level. A total of 109 graduate students of the College of Teacher Education in one government-funded university in the Western Visayas region of the Philippines were included in the analysis of this study. Inclusion criteria for the study were: a) officially enrolled graduate students of the college, b) currently on their course-work, c) attending online classes in the graduate program, d) reported more than one hour of video calls during online classes, and e) agreed to participate in the study. We excluded those who were writing their thesis or dissertation and reported less than an hour duration of videoconferencing during their graduate classes. The school granted administrative clearance for this academic research applying the principles of research ethics. We administered the electronic survey using Google Forms in March 2022. The link to the survey was sent to the registered email addresses of the students and was also posted on the official social media accounts of the college. Respondents had to give electronic consent before answering the actual surveys. Following the Data Privacy Act of the country, respondents were assured of their anonymity and the confidentiality of their responses.

2.2 Measures

The Zoom Exhaustion and Fatigue (ZEF) scale was adopted as the primary research instrument for this study. Researchers from Stanford University developed the ZEF scale as a valid and reliable measure for Zoom fatigue [10]. The scale is composed of 15-items with five dimensions having three items for each dimension, namely: general fatigue, social fatigue, emotional fatigue, visual fatigue, and motivational fatigue. The items on the scale are measured on a 5-point Likert-scale ranging from 1 = "Not at all" to 5 = "Extremely," except for the two frequency questions from 1 = "Never" to 5 = "Always." Higher scores indicate higher levels of fatigue. Evaluation of the psychometric properties of the ZEF scale found good internal consistency [10, 21]. The ZEF scale for this study had high internal reliability with a Cronbach's alpha = .94. A three-item Likert-scale was adopted to assess attitude toward videoconferences [10]. The responses ranged from 1 = "Not at all" to 5 = "Extremely". We also adopted measures to assess the five non-verbal mechanisms specific to videoconference use [18]. First, mirror anxiety was measured by three items on a 5-point Likert-scale from 1 = "not at all" to 5 = "extremely" to assess how self-viewing while videoconferencing would associate with Zoom fatigue. Second, the sense of being physically trapped was measured by three items on a 5-point Likert scale from 1 = "never"/ "not at all" to 5 = "always"/ "extremely" to examine how limited physical mobility imposed by the need to be in front of the camera while video conferencing would associate with Zoom

fatigue. The third mechanism of hyper gaze was measured by a single-item scale on a 5-point Likert from 1 = "never" to 5 = "always" to investigate the perceived gaze of constantly having peoples' eyes in your field of view. The other two nonverbal mechanisms are related to the increased cognitive load of managing (producing and interpreting) nonverbal cues were assessed by single items answerable on a 5-point Likert scale from 1 = "not at all" to 5 = "extremely." We also collected the demographic profile (age, sex, marital status, degree program) of students.

2.3 Data analysis

Analysis of data gathered was done using IBM SPSS version 26. Frequency, percentage, mean, and standard deviation were used for univariate analysis, and Pearson's r was utilized for correlation analysis. Multiple linear regression using the enter method was employed to identify predictors of Zoom fatigue. A p-value of less than .05 was considered statistically significant.

3 Results

The demographic profile of the respondents is shown in Table 1. The average age of the respondents was 28.77 years old, 82.6% were female, and 74.3% were single. There were 75.2% master's degree students and 24.8% doctoral students.

Table 1. Demographic profile

Profile	f	%
Age [Mean=28.77 (SD=7.58]		
Sex		
Male	19	17.4
Female	90	82.6
Marital status		
Single	81	74.3
Married	28	25.7
Degree program		
Master's	82	75.2
Doctoral	27	24.8

Table 2 shows that respondents generally had a positive attitude toward videoconferences with a mean of 3.76 (SD=.62). Among the non-verbal mechanism, respondents reported a high sense of feeling physically trapped during videoconferences (M=3.79, SD=.63), moderate levels of cognitive load in producing (M=2.96, SD=1.10), and interpreting (M=2.95, SD=.90) non-verbal cues in computer-mediated communication, and an average level of mirror anxiety (M=2.86, SD=.82) and hyper gaze from a grid of starring faces (M=2.57, SD=.98).

Table 2. Attitude and non-verbal mechanisms

Variables	Mean	SD
Attitude toward videoconferences	3.76	.62
Non-verbal mechanisms		
Sense of being physically trapped	3.79	.63
Cognitive load in producing non-verbal cues	2.96	1.10
Cognitive load in interpreting non-verbal cues	2.95	.90
Mirror anxiety	2.86	.82
Hyper gaze from a grid of starring faces	2.57	.98

It can be gleaned on Table 3 that respondents generally reported a moderate level of Zoom fatigue with an overall ZEF score of 3.37 (SD=.79). Based on the ZEF subscales, respondents reported a high level of general fatigue (M=3.80, SD=.73), visual fatigue (M=3.61, SD=.96), motivational fatigue (M=3.51, SD=.97), and moderate levels of social (M=3.11, SD=1.16), and emotional fatigue (M=2.81, SD=1.06).

Table 3. Level of Zoom fatigue

Zoom fatigue and subscales	Mean	SD
General	3.80	.73
Visual	3.61	.96
Motivational	3.51	.97
Social	3.11	1.16
Emotional	2.81	1.06
ZEF score	3.37	.79

Correlational statistical analysis (Table 4) using Pearson's r revealed a weak inverse correlation but significant (r=-.301, p=.001) between attitude toward videoconferencing and Zoom fatigue. Non-verbal mechanisms of cognitive load in producing non-verbal cues (r=.397, p=.000), sense of being physically trapped (r=.386, p=.000), hyper gaze from a grid of starring faces (r=.320, p=.001), and mirror anxiety (.240, p=.012) showed weak to moderate significant positive correlation with Zoom fatigue.

Table 4. Correlation of attitude and non-verbal factors to Zoom fatigue

Variables	Pearson's r	p-value
Attitude	-.301	.001
Non-verbal mechanisms		
Cognitive load in producing non-verbal cues	.397	.000
Sense of being physically trapped	.386	.000
Hyper gaze	.320	.001
Mirror anxiety	.240	.012
Cognitive load in interpreting non-verbal cues	-.104	.284

The multiple regression analysis (Table 5) revealed that when the six independent variables were entered into the regression model, the sense of being physically trapped (B=.379, p=.001) and cognitive load in producing non-verbal cues (B=.156, p=.044) remained significant predictors of Zoom fatigue explaining 30.4% of the variance in Zoom fatigue.

Table 5. Regression analysis of Zoom fatigue predictors

Variables	B	t	p-value
(Constant)	2.107	2.702	.008
Sense of being physically trapped	.379	3.478	.001
Cognitive load in producing non-verbal cues	.156	2.044	.044
Attitude	-.175	-1.514	.133
Mirror	.082	.878	.382
Hyper gaze	.065	.769	.444
Cognitive load in interpreting non-verbal cues	-.129	-1.741	.085

R Square = .304, F = 7.419, p = .000

4 Discussion

This study examined Zoom fatigue in graduate teacher education. We demonstrated in this research that graduate students generally had a moderate level of Zoom fatigue. Virtual platform communication is more mentally exhausting than traditional face-to-face communication [22]. While a high fatigue level was reported among undergraduate nursing students [23], comparable levels of fatigue were noted in the Stanford study [18], among Indonesian university students [14], and Filipino teachers [8]. Approximately 41-56% prevalence of Zoom fatigue was reported among medical school students in Brazil [19]. We also noted in this research that graduate students experienced the highest level of fatigue in the general fatigue domain, followed by the visual fatigue domain, a similar finding from the study of undergraduate students [23] and faculty and school administrators [8, 12]. Steps to lessen the fatigue experienced in video calls in graduate education may be made, such as better video conference management and technical improvements in videoconferencing applications [24]. Nevertheless, it is important to acknowledge that meetings generally can be pretty tiring regardless of the medium [5].

This research also noted that among the five nonverbal factors, the sense of being physically trapped is the most significant predictor of Zoom fatigue. This result replicates the findings of prior studies based abroad and locally [8, 12, 18]. Zoom users need to stay within the camera's field view resulting in reduced mobility when sitting down and staring straight ahead for most of the time during videoconferencing [5]. Being non-responsive when attending synchronous Zoom classes can exacerbate fatigue symptoms and decrease learning capacity and attention [25]. Moreover, cognitive load in producing non-verbal cues predicted higher levels of fatigue. This finding corroborates that of the Stanford study result [18]. Cognitive load in creating non-verbal cues was also found to be correlated with Zoom fatigue in studies conducted

in the Philippines [8, 12]. Users of Zoom need to work harder to send nonverbal signals contributing to higher levels of fatigue [5]. A qualitative study also noted themes that Zoom fatigue causes stress and increases mental and cognitive load [15].

We also demonstrated in this research that hyper gaze and mirror anxiety were significantly correlated with Zoom fatigue which corroborates prior research results [8, 18]. In this study, a higher level of hyper haze was associated with greater levels of Zoom fatigue. In Zoom and other video conferencing platforms, people get front-on views of all other people for hours consecutively, and the amounts of close-up eye contact can be intense [5]. Additionally, this study also found that a higher level of mirror anxiety was linked to higher fatigue. It has been explained that staring at oneself can result in negative self-focused attention. In other words, seeing a mirror image of oneself for several hours in a virtual meeting can likely lead to self-evaluation that can be stressful [5, 26].

This study also found that while not a significant predictor, a more positive attitude toward videoconferences was significantly correlated with lower levels of Zoom fatigue. Similar findings were found in other studies conducted in other countries [10,18] and among undergraduate students and teachers in the Philippines [8, 23]. Perhaps, the tiring and exhausting experience during videoconferencing influenced these two related variables. Students' negative attitudes and acceptance of online learning have also been recorded [27, 28]. Understanding the role of attitudes is important because it may influence the strength of intention and acceptance of videoconferencing platforms in the future [29, 30].

Nonetheless, the authors of this study acknowledge limitations in this research that could influence the generalizability and reliability of findings, which future works may address. First, this study only involves a sample of graduate students in teacher education in one university in the Philippines. Also, while the study was able to examine associations between variables, the cross-sectional design has temporal limitations. Likewise, the research design cannot establish a causal effect between the variables tested in this study. Moreover, bias in self-report measures in the use of questionnaires and the need for a more robust psychometric evaluation of measures to assess nonverbal factors [18] may have also influenced the result of our study. Despite these limitations, our research adds to the body of knowledge on the understanding of Zoom fatigue in graduate education. This research will be useful in informing the design and implementation of effective strategies against the unintended negative effects of technology use [6].

5 Conclusion

This study highlights an overall moderate level of fatigue associated with the use of videoconferencing tools among graduate students. Moreover, the present study generally supports previous research on the association of attitude toward videoconferences and the role of non-verbal mechanisms specific to the use of virtual conferences on Zoom fatigue experience. While videoconferencing applications have been beneficial and supported educational activities during the global disease outbreak,

it is recommended to be mindful of the non-verbal factors that contribute to Zoom fatigue and know how to optimize the current videoconferencing features to help minimize the exhaustion during virtual meetings. For instance, having short breaks between a series of Zoom calls, turning one's video off periodically during meetings, or turning on the video only when necessary can be good ground rules during videoconferencing or virtual sessions. The findings of this study contribute to the growing literature on Zoom fatigue and can serve as a basis for crafting policies regarding videoconferencing application use in higher educational institutions.

6 References

[1] X. Shen, & J. Liu, (2022). "Analysis of factors affecting user willingness to use virtual online education platforms," *International Journal of Emerging Technologies in Learning*, vol. 17, no. 1, pp. 74-89, 2022. https://doi.org/10.3991/ijet.v17i01.28713

[2] C. K. Massner, "The use of videoconferencing in higher education," In F. Pollák, J. Soviar, & R. Vavrek (Eds.), *Communication Management,* IntechOpen, 2021. https://doi.org/10.5772/intechopen.99308

[3] B. K. Wiederhold, "Connecting through technology during the coronavirus disease 2019 pandemic: Avoiding "Zoom Fatigue"," *Cyberpsychology, Behavior, and Social Networking*, vol. 23, no. 7, 437-438, 2020. https://doi.org/10.1089/cyber.2020.29188.bkw

[4] M. Iqbal, "Zoom revenue and usage statistics (2022)", 2022. https://www.businessofapps.com/data/zoom-statistics/

[5] J. N. Bailenson, (2021), "Nonverbal overload: A theoretical argument for the causes of zoom fatigue," *Technology, Mind, and Behavior*, vol. 2 no. 1, 2021. https://doi.org/10.1037/tmb0000030

[6] R. Riedl, "On the stress potential of videoconferencing: definition and root causes of zoom fatigue," *Electronic Markets*, 2021. https://doi.org/10.1007/s12525-021-00501-3

[7] N. Döring, K. D. Moor, M. Fiedler, K. Schoenenberg, and A. Raake, "Videoconference fatigue: A conceptual analysis," *International Journal of Environmental Research and Public Health*, vol. 19, no. 4, Article 2061, 2022. https://doi.org/10.3390/ijerph19042061

[8] R. M. F. Oducado, M. A. C. V. Dequilla, and J. F. Villaruz, "Factors predicting videoconferencing fatigue among higher education faculty," *Education and Information Technologies,* 2022. https://doi.org/10.1007/s10639-022-11017-4

[9] J. F. Serembus and D. C. Kemery, "Creating dynamic learning with zoom," *Nurse Educator*, vol. 45, no. 6, pp. 291-293, 2020. https://doi.org/10.1097/NNE.0000000000000915

[10] G. Fauville, M. Luo, A. C. Queiroz, J. N. Bailenson, and J. Hancock, "Zoom exhaustion & fatigue scale," *Computers in Human Behavior Reports*, vol. 4, Article 100119, 2021. https://doi.org/10.1016/j.chbr.2021.100119

[11] R. Nadler, "Understanding "Zoom fatigue": Theorizing spatial dynamics as third skins in computer-mediated communication," *Computers and Composition*, vol. 58, Article 102613, 2020. https://doi.org/10.1016/j.compcom.2020.102613

[12] R. M. F. Oducado, J. F. Villaruz, M. A. C. V. Dequilla, and G. M. Parreño-Lachica, "Zoom fatigue and mental well-being among school executives," *Journal of Loss and Trauma,* 2021. https://doi.org/10.1080/15325024.2021.2002617

[13] D. K. Poskakalova, "Relations between the zoom fatigue phenomenon and the psychological well-being of Moscow university students: Results of an empirical study," In *Digital*

Humanities and Technology in Education (DHTE 2021), pp. 712-724, 2021. https://psyjournals.ru/en/dhte2021/issue/Poskakalova2.shtml

[14] J. Salim, S. Tandy, J. N. Arnindita, J. J. Wibisono, M. R. Haryanto, and M. G. Wibisono, "Zoom fatigue and its risk factors in online learning during the COVID-19 pandemic," *Medical Journal of Indonesia*, 2022. https://doi.org/10.13181/mji.oa.225703

[15] I. Usta Kara, and E. G. Ersoy, "New exhaustion emerged with COVID-19 and digitalization: A qualitative study on zoom fatigue," *OPUS Journal of Society Research*, vol. 19, no. 46, pp. 365-379, 2022. https://doi.org/10.26466/opusjsr.1069072

[16] A. N. Bullock, A. D. Colvin, and M. S. Jackson, "All Zoomed out": Strategies for addressing zoom fatigue in the age of COVID-19," In *The Learning Ideas Conference*, Springer, Cham, pp. 61-68, 2021. https://doi.org/10.1007/978-3-030-90677-1_6

[17] N. Williams, "Working through COVID-19: 'Zoom' gloom and 'zoom' fatigue," *Occupational Medicine*, vol. 71, no. 3, pp. 164-164, 2021. https://doi.org/10.1093/occmed/kqab041

[18] G. Fauville, M. Luo, A. C. Queiroz, J. N. Bailenson, and J. Hancock, "Nonverbal mechanisms predict zoom fatigue and explain why women experience higher levels than men," *SSRN Electronic Journal*, 2021. http://dx.doi.org/10.2139/ssrn.3820035

[19] J. B. de Oliveira Kubrusly Sobral, D. L. F. Lima, H. A. Lima Rocha, E. S. de Brito, L. H. G. Duarte, L. B. B. B. Bento, and M. Kubrusly, "Active methodologies association with online learning fatigue among medical students," *BMC Medical Education*, vol. 22, no. 1, 2022. https://doi.org/10.1186/s12909-022-03143-x

[20] E. Peper, V. Wilson, M. Martin, E. Rosegard, and R. Harvey, "Avoid zoom fatigue, be present and learn," *NeuroRegulation*, vol. 8, no. 1, pp. 47-47, 2021. https://doi.org/10.15540/nr.8.1.47

[21] D. A. D. Putri, A. F. Rasyid, A. P. D. Wangsya, and R. Novrianto, "Evaluation of psychometric properties of the zoom exhaustion & fatigue (ZEF) scale in the Indonesian population", *Psychopolytan: Jurnal Psikologi*, vol. 5, no. 2, pp. 117-125, 2022. https://doi.org/10.36341/psi.v5i2.2216

[22] A. V. M. Tobing, V. Irawan, Y. Salim, and S. W. Sulistyawati, "Participants' levels of understanding before and after attending the zoom fatigue during COVID-19 pandemic webinar," *World Journal of Advanced Research and Reviews*, vol. 13, no. 1, pp. 338-342, 2022. https://doi.org/10.30574/wjarr.2022.13.1.0017

[23] R. M. F. Oducado, M. T. R. Fajardo, G. M. Parreño-Lachica, J. D. Maniago, P. M. B. Villanueva, M. A. C. V. Dequilla, H. C. Montaño, and E. E. Robite, "Predictors of videoconference fatigue: Results from undergraduate nursing students in the Philippines," *Asian Journal for Public Opinion Research*, vol. 9, no. 4, pp. 310-330, 2021. https://doi.org/10.15206/ajpor.2021.9.4.310

[24] H. N. Shoshan, and W. Wehrt. "Understanding "zoom fatigue": A mixed-method approach," *Applied Psychology,* 2021. https://doi.org/10.1111/apps.12360

[25] E. Peper, and A. Yang, "Beyond zoom fatigue: Re-energize yourself and improve learning," *Academia Letters*, Article 257, 2021. https://doi.org/10.20935/AL257

[26] R. Ratan, D. B. Miller, and J. N. Bailenson, "Facial appearance dissatisfaction explains differences in zoom fatigue," *Cyberpsychology, Behavior, and Social Networking,* vol. 25, no. 2, 124-129, 2022. https://doi.org/10.1089/cyber.2021.0112

[27] M. Alaghawat, and I., "Distance learning at the university of Jordan in the setting of Covid-19 pandemic from the students' perspectives," *International Journal of Emerging Technologies in Learning*, vol. 17, no. 6, pp. 4-22, 2022. https://doi.org/10.3991/ijet.v17i06.27845

[28] M. A. Tamal, M. F. H. Sarker, M. K. Islam, and M. E. Hossain, "Acceptance of e-learning among university students during Covid-19 crisis: Bangladesh perspective," *International Journal of Emerging Technologies in Learning*, vol. 17 no. 6, pp. 152-162, 2022. https://doi.org/10.3991/ijet.v17i06.28033

[29] J. Fishman, C. Yang, and D. Mandell, "Attitude theory and measurement in implementation science: a secondary review of empirical studies and opportunities for advancement," *Implementation Science*, vol. 16, Article 87, 2021. https://doi.org/10.1186/s13012-021-01153-9

[30] J. E. P. Pedroso, R. M. F. Oducado, A. R. S. Ocampo, V. S. Tan, and K. A. Tamdang, "Factors influencing intention to use videoconferencing tools in online distance education among students in Philippine maritime schools," *Australian Journal of Maritime & Ocean Affairs*, 2021. https://doi.org/10.1080/18366503.2021.2014181

7 Authors

Dr. Rome B. Moralista is an Associate Professor at Guimaras State College and was the former Vice President for Research, Extension, Training and Innovation.

Dr. Ryan Michael F. Oducado is a faculty member of the West Visayas State University College of Nursing. He is a registered nurse, midwife, and professional teacher and holds a doctoral degree in education.

Dr. Baby Rose G. Robles is an Assistant Professor at West Visayas State University College of Education. She handles Psychology and Values Education subjects in the undergraduate program as well as Guidance and Counseling courses in the graduate school.

Dr. Daisy A. Rosano is a reading specialist and a faculty of the West Visayas State University College of Education. She handles courses both in the undergraduate and graduate program of Teacher Education.

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