# Graduate students' work status, perception, and online satisfaction predicting in-person instruction intention

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## **ABSTRACT**

Along with easing COVID-19 restrictions, schools are reopening and starting face-to-face classes. Intending in-person instruction after a relatively long period after off-campus and online learning requires exploration. This study determined the factors that predict students' intention to attend in-person instruction among graduate students. The responses of 178 college of education graduate students were gathered electronically using valid and reliable survey instruments. Findings showed that graduate students are moderately to highly satisfied with online learning but also highly intend to attend in-person instruction. The majority of graduate students think that it is unsafe and possible to spread COVID-19, and felt worried to less worried when school reopens. Multiple regression revealed that work status, perceived safety and worry about school reopening, and online learning satisfaction predicted intention to attend in-person instruction. School administrators should ensure the safety operation of schools should students return to campuses, especially when there are threats to their health and security.

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# 1. INTRODUCTION

The COVID-19 pandemic has precipitated unparalleled disruption in higher education, necessitating that educational institutions and students acclimate to remote and online learning modalities [1]–[3]. Before the pandemic, graduate schools in the Philippines primarily conducted classes in the traditional face-to-face form [4]. However, with the onset of the pandemic, they transitioned to the emerging online learning modality. Graduate students pursuing advanced degrees that often require rigorous coursework and research have found themselves at the intersection of the changes brought about by the pandemic and the shift in learning modality [5], [6]. In the Philippine context, research during the early part of the pandemic showed that graduate students encountered levels of stress, fear, and anxiety ranging from moderate to high [7]. Additionally, some challenges experienced pertain to technology and internet accessibility, with the acquisition of paid online resources posing an obstacle in fulfilling research-related tasks expected in graduate studies [8].

Since the onset of the COVID-19 pandemic, educational institutions in the Philippines have remained closed, resulting in one of the longest school breaks globally [9]. Due to the widespread availability and expanded distribution of COVID-19 vaccines, along with the conclusion of the pandemic's critical phase [10], restrictions have gradually relaxed, and higher education institutions and schools have resumed in-person classes [11]. Hence, the intention to attend in-person instruction after a relatively long period after

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off-campus and online learning requires exploration. Transitioning from online to face-to-face classes necessitates adjustment [12]. After becoming accustomed to remote learning environments, students and teachers may need time to readapt to the dynamics of in-person instruction, including interacting in real-time, navigating physical classroom settings, and engaging in hands-on learning activities. Moreover, transitioning back to in-person classes and any other changes individuals may encounter can elicit various psychological responses [10]. Educational institutions and schools could consider students' diverse beliefs and perceptions to gain a deeper insight into their inclination toward in-person instruction [13].

A literature review resulted in certain studies exploring the return to face-to-face classes. For instance, a study in Indonesia and Australia looked at teachers' well-being and perceptions about school reopening [14], [15]. The willingness of Chinese parents to send their children back to school after the outbreak was also assessed [16]. A study in the United Kingdom also reported internal and external challenges in the reverse transition of shifting from online to offline education [17]. A cross-country comparison of fear of returning to traditional classes during the COVID-19 pandemic involving university students from Portugal, France, England, Brazil, and Paraguay was also conducted [18]. A study in a Peruvian public university reported symptoms of depression, anxiety, and stress in students when returning to traditional on-campus classes [19]. The experiences of students in higher education in Venezuela, Ecuador, and Chile returning to face-to-face classrooms were also documented [20]. Studies were also conducted in the Philippine setting [12], [13].

Despite research on return to in-person classes, research among graduate students is still underrepresented. This study delves into the complex interplay of various factors that influence the intention of graduate students to return to in-person instruction. By investigating the role of these factors, this research aims to shed light on the intricate factors influencing the decisions of graduate students, thus contributing to the broader dialogue on higher education in a post-pandemic world. Further, understanding the intricate relationships between these predictors can provide valuable insights for educational institutions, policymakers, and academic advisors, enabling them to make informed decisions about the future of graduate education during and beyond the pandemic.

#### 2. METHOD

## 2.1. Research design and participants

This study used a descriptive, correlational, cross-sectional research design. In 2022, during the initial stage of the Philippines' transition back to in-person instruction, 178 graduate students of the college of education of a University in Western Philippines actively participated in the study. The minimum required sample size based on a-priori sample size calculator for multiple regression with nine predictor variables, .15 anticipated effect size, .80 desired statistical power level, and a 5% probability level is only 113.

## 2.2. Survey instruments

The data collection tool for this survey included four parts. The first part asked about participants' personal characteristics, which include age, sex, residence, marital status, degree program, work status, and vaccination status. Two questions on school reopening perceptions of perceived safety and worry ("What do you think the conditions will be like when the school reopens?" and "How do you feel about schools reopening?") were adopted from earlier Indonesian research [14]. The 7-item online learning satisfaction scale [21] was adopted with 5-point Likert response options ranging from "1-strongly disagree" to "5-strongly agree" and Cronbach's alpha of .95 for this study. Another scale was adopted to assess graduate students' in-person instruction intention [13]. The scale consisted of 5 items answerable by "1-strongly disagree" to "5-strongly agree." Table 1 shows the numerical values and response options of the Likert scale. Moreover, the Cronbach's alpha of the scale for this study sample was highly reliable, with a value of .97.

Table 1. Response options and numerical values of the Likert scale

Numerical va	alues Interpretation
5	Strongly agree
4	Agree
3	Neither agree or disagree
2	Disagree
1	Strongly disagree

## 2.3. Data collection

An online survey methodology was employed to gather data for this study. The survey was designed to investigate various factors influencing the intention of graduate students to attend in-person instruction

among graduate students. To commence the data collection process, administrative clearance was obtained for the academic research's technical and ethical conduct. The survey tool was distributed via Google Forms, offering participants a user-friendly and easily accessible platform. The survey remained open for responses from March to April 2022. Participants were instructed to provide honest and thoughtful responses to contribute valuable insights to the research. Upon the survey's closure, the collected data were exported from Google Forms for further analysis per the study's objectives.

## 2.4. Statistical data analysis

Data analysis was conducted utilizing IBM SPSS version 26. Descriptive statistics (frequency, percentage, standard deviations, and mean) were used to characterize the data. Inferential statistical tests were employed to explore significant differences and correlations, including the t-test for Independent Samples, one-way ANOVA, and Pearson's r. Multiple regression analysis was utilized to determine significant predictors, and the significance level was set at .05 alpha.

## 3. RESULTS

Table 2 shows that the average age of the participants was 29, and all (100%) were vaccinated against COVID-19. The majority were female (80.3%), residing in towns (67.4%), single (73%), enrolled in the masters' degree program (77.5%), and presently working or employed (89.3%). Table 3 shows that 40.4% felt not so safe and that there was a possibility of spreading COVID-19, while 39.9% and 41% felt worried and less worried about school reopening, respectively. Regarding online learning satisfaction, 34.3% were moderately satisfied, and 40.4% were highly satisfied. A total of 28.1% and 37.1% had high to very high intentions to attend in-person instruction, respectively.

Table 2. Personal characteristics

Variables		Frequency	Percentage	
Age	[M=29.19, SD=7.44]			
Gender	Male	35	19.7%	
	Female	143	80.3%	
Residence	City	58	32.6%	
	Town	120	67.4%	
Marital status	Single	130	73.0%	
	Married	48	27.0%	
Degree program	Masters	138	77.5%	
	Doctoral	40	22.5%	
Work status	No	19	10.7%	
	Yes	159	89.3%	
Vaccination status	Yes	178	100%	
	No	-	-	

Note: M=mean, SD: standard deviation

Table 3. School reopening perception, online learning satisfaction, in-person classes intention

Variables		Frequency	Percentage
What do you think the conditions will	Safe and unlikely to spread COVID-19	45	25.3%
be like when the school reopens?	Not so safe, and there is a possibility of spreading COVID-19	72	40.4%
	Unsafe with the possibility of spreading COVID-19	11	6.2%
	Unpredictable	48	27.0%
	I do not know	2	1.1%
How do you feel about schools	Very worried	9	5.1%
reopening?	Worried	71	39.9%
	Less worried	73	41.0%
	Not worried	17	9.6%
	Unsure	8	4.5%
Level of Satisfaction [M=3.62, SD=.86]	Very high	30	16.9%
	High	72	40.4%
	Moderate	61	34.3%
	Low	13	7.3%
	Very low	2	1.1 %
Level of Intention [M=3.90, SD=1.02]	Very high	66	37.1%
	High	50	28.1%
	Moderate	41	23.0%
	Low	18	10.1%
	Very Low	3	1.7%

Note: Very low=1.00-1.50, Low=1.51-2.50, Moderate=2.51-3.50, High=3.51-4.50, Very high=4.51-5.00

Table 4 shows that the t-test for Independent Samples revealed that there was a significant difference in the intention to attend in-person instruction based on work status (t=-2.950, p=.004), perception of safety on school reopening (t=6.193, p=.001), and feeling of worry on school reopening (t=7.627, p=.000). Pearson's r revealed a statistically significant inverse correlation (r=-.412, p=.000) between online learning satisfaction and intention to attend in-person instruction. Moreover, multiple regression analysis showed that work status (B=.587, p=.014), perceived safety (B=.100, p=.024), perceived worry (B=-.195, p=.026), and online learning satisfaction (B=-.445, p=.000) were significant predictors of graduate students' intention to attend in-person instruction explaining 27% of the variance.

Table 4. Associated factors of intention to attend in-person instruction

	37 ' 11	Bivariate analysis			Regression analysis	
	Variables	M (SD)	Test statistics	p-value	В	p-value
Gender <sup>a</sup>	Male	3.87 <u>+</u> 1.20	191	.849	.006	.976
	Female	$3.91 \pm 1.00$				
Residence <sup>a</sup>	City	$3.79 \pm 1.02$	976	.331	.109	.474
	Town	3.96 ± 1.04				
Marital status <sup>a</sup>	Single	$3.96 \pm 1.00$	1.323	.188	335	.105
	Married	3.73 <u>+</u> 1.13				
Degree program <sup>a</sup>	Masters	3.93 + 1.01	.603	.547	.077	.686
	Doctoral	$3.82 \pm 1.12$				
Work status <sup>a</sup>	Yes	$3.98 \pm 1.03$	-2.950	.004*	.587	.014*
	No	$3.35 \pm .93$				
Safety <sup>b</sup>	Safe	4.41 <u>+</u> .79	6.193	.001*	.100	.024*
	Not so safe	$3.74 \pm 1.03$				
	Unsafe	$3.27 \pm .91$				
	Unpredictable/I do not know	3.81 <u>+</u> 1.12				
Worry <sup>b</sup>	Worried to very worried	3.57 <u>+</u> 1.13	7.627	*000	195	.026*
	Less worried	$4.15 \pm .85$				
	Not worried	4.59 + .82				
	Unsure	$3.60 \pm .88$				
$Age^c$		<del></del>	010	.898	.011	.391
Satisfaction <sup>c</sup>			412	*000	455	*000

Note: R Square = .270, F = 6.894, p = .000, at-test, bANOVA, Pearson's, \*p<.05

## 4. DISCUSSION

This study highlights the importance of considering the multifaceted factors influencing graduate students' intentions regarding in-person instruction. Graduate students in this study had a high intention of attending face-to-face classes. Similarly, nursing students in the Philippines strongly desired to return to the traditional mode of instructional delivery [13]. Also, while Chinese parents were worried, they were willing to bring their children back to school and recommence classes [16]. However, some studies reported otherwise. Students in the United Kingdom strongly resisted returning to offline in-campus classes [17].

It must be noted that this survey was conducted two years after the pandemic, and all graduate students in this study had already been vaccinated. This research also found that about 50% of the students were less worried about returning to in-person classes and that the perception of safety and concerns about school reopening substantially influenced students' intentions. Perception of the risk posed by the coronavirus decreased from the epidemic to the post-epidemic phase, reducing protective behaviors [22]. Also, the perception of the risk of COVID-19 infection notably decreased following vaccination [23]. This could have influenced their greater desire for in-campus classes compared to surveys conducted earlier during the pandemic. On the contrary, research in Peru disclosed that 67.2% expressed apprehension about returning to in-person classes [10]. Students in Saudi Arabia at a private university were observed to be experiencing worry and stress due to COVID-19, which had a detrimental effect on their comfort levels while on campus shortly after the return to in-person classes [24]. Among teachers, those in Indonesia were also concerned about health risks if schools reopen [14]. Teachers in Japan, Norway, and Australia encountered anxiety about infection impacting their well-being after the reopening of schools amid the COVID-19 pandemic [15], [25], [26]. Therefore, schools must prioritize and communicate safety measures effectively, addressing students' worries and creating a transparent, reassuring environment. Regular updates and transparent communication about safety protocols may help alleviate concerns and increase students' willingness to receive in-person instruction [27].

This study also demonstrated that online learning satisfaction significantly determines students' intentions for face-to-face learning. Graduate students who have had positive experiences with online learning may be more inclined to continue with this modality. However, those who are dissatisfied may prefer in-person instruction. Satisfaction significantly influences behavioral intention [28]. It has also been

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reported that university students who favor a distance learning model exhibit notably elevated levels of fear of returning to face-to-face learning during the COVID-19 pandemic [18]. Besides, while this study found an inverse correlation between online learning satisfaction and intention to attend face-to-face classes, it also found a high online learning satisfaction and intention of students to return to face-to-face classes. This result may suggest students preferring a more blended approach in graduate education. Similarly, a study in Romania recommended a blended learning approach [29]. A survey among students in Chile, Venezuela, and Ecuador found that students prefer a blended learning approach when comparing online and in-person instruction [20]. A similar pattern was noted among graduate students in the Philippines wanting a blended type of graduate study [4]. A blended learning modality promotes a harmonious integration of face-to-face and digital education, utilizing and leveraging the strengths of both approaches [30]-[32]. Some potential advantages of blended learning encompass enhanced pedagogy, increased engagement in learning, and greater flexibility in teaching and learning methodologies [33]. One study among graduate students disclosed that the advantages of blended learning outweighed its challenges [34]. Offering students options in learning modalities benefits students [35]. Academic institutions should enhance the quality of their online learning platforms and traditional face-to-face delivery to guarantee that students receive quality educational instruction regardless of the mode of teaching and delivery. Nevertheless, a review study strongly recommends conducting extensive research on blended learning, taking into account the local context [36].

Finally, it is noteworthy that work status emerged as a significant predictor in this study. Graduate students who were working had greater inclinations to attend face-to-face classes. Recently published research likewise found that student status (a student working part-time compared to those not working part-time) influences students' preference toward the learning environment [36]. Perhaps their experience working face-to-face and knowing they are already vaccinated may have contributed to their reduced concern for COVID-19, making them more likely to attend face-to-face sessions. On the other hand, graduate students who are not working may be hesitant to participate in face-to-face classes during the COVID-19 pandemic due to concerns about their health and safety, the convenience of online learning, and the perceived better quality of remote instruction compared to in-person classes. Nonetheless, a better understanding of how student attributes correlate with their preferences for specific learning environments can aid educational institutions and educators in crafting diverse and engaging learning experiences tailored to learners' unique characteristics and cater to graduate students' diverse work statuses [36].

This study has certain limitations that should be acknowledged. It primarily focused on graduate students of the College of Education, which restricts the generalizability of the findings to the specifics of the Philippine context. To improve the generalizability of the conclusions, it is imperative for future research to expand the sample size by incorporating graduate students from diverse disciplines and schools. In addition, the cross-sectional design of this study poses constraints on making causal inferences, as it only explored the relationship between the predictor and outcomes variables. It is important to note that the outcomes derived from this research are susceptible to self-report bias. Given the limitations, caution is advised when interpreting and applying the research findings. Despite these limitations, the study contributes valuable insights to the evidence concerning factors affecting the intention to attend in-person instruction after prolonged remote learning.

## 5. CONCLUSION

This study's results highlight the importance of considering the multifaceted factors influencing graduate students' intention to attend in-person instruction after long community quarantine and remote learning. The three key predictors, namely work status, perceived safety and concern about school reopening, and online learning satisfaction, have significantly contributed to this intention for face-to-face classes among graduate students. In the evolving landscape of higher education, this research underscores the significance of considering these factors when examining the preferences and inclinations of graduate students towards returning to in-person classes to foster a more responsive and accommodating learning environment in graduate education and help meet the diverse needs of graduate students in the post-pandemic era. School administrators and educational policymakers seeking to design more effective approaches that address diverse needs and preferences may consider a more flexible modality combining face-to-face and online education in delivering graduate programs and ensuring the safe operations of schools.

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