

# WHAT MOTIVATES AMERICAN AND FILIPINO STUDENTS TO TAKE ONLINE CLASSES?

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## ABSTRACT

*This cross-cultural study of the Philippines and the United States examines factors that affect students' online learning motivation by focusing on technical and psychological perceptions and how these perceptions influence goal orientation for online learning among American and Filipino students. Applying Self-Determination Theory and the Technology Acceptance Model as the theoretical foundations, this study scrutinizes how the two countries' different cultural perceptions and levels of IT infrastructure affect online learning. Several constructs for psychological and technological aspects were measured. All relationships were significant for both countries. However, external regulation is not significant to intrinsic motivation for the American respondents, while an external reward is negatively significant to intrinsic motivation for Filipino respondents. This study suggests that psychological and technological factors are important to increase intention to take online classes for American and Filipino students.*

**Keywords:** *online learning, motivation, Technology Acceptance Model, Self-Determination Theory*

## INTRODUCTION

The trend of teaching online courses has been growing and administrators are seeking to capture a new market of students who favor online courses over face-to-face classes in higher education. One of the main reasons for this modality shift is that the new generation of learners are highly active internet users. In addition, during the COVID-19 pandemic schools worldwide went entirely online (Pal & Vanijja, 2020).

In the United States, the internet is potentially a great medium for teaching college students since there is a high degree of penetration and adoption in the population. However, the information technology (IT) infrastructure is not as advanced in developing countries due to the slow internet penetration rate, insufficient bandwidth, issues with reliability, and the affordability of connection (Acharya & Lee, 2018). Despite these challenges, the adoption of online classes in higher education has also increased in many developing countries

(Muller & Mildenerger, 2021). However, there is a lack of understanding of the factors that motivate students to take online classes.

Ryan and Deci (2000) define motivation as why people act in specific ways toward the goals they implement for themselves. In education, motivation has been studied to increase students' involvement in online classes (Ames, 1992; Eggen & Kauchak, 2007; Reid, 2007; Tseng et al., 2019; Yarahmadi, 2012). Psychological and technological factors can drive learning motivation. Eggen & Kauchak (2007) demonstrated that a teacher's understanding of educational psychology could motivate students and effectively affect students' learning outcomes. Yarahmadi (2012) concluded that the degree of the perceived value of schooling influenced the students' self-determined motivation and perceived competence. Since online learning involves technology, studies have shown what technology is necessary for driving learning motivation. Esteban-Millat et al. (2018) found that students find it easier

to experience perceived usefulness and perceived ease of use if they enjoy their tasks. Similarly, Tao et al. (2019) found that perceived usefulness and perceived ease of use predicted the intention to take Massive Open Online Courses (MOOCs). Bazelais et al. (2018) further validated the importance of perceived usefulness and perceived ease of use as predictors of intention to use online learning technologies in a virtual classroom.

This study examines factors that affect students' online learning motivation by focusing on technical and psychological perceptions and how these perceptions influence goal orientation. As a cross-cultural study, Philippines and the United States were chosen for several reasons. Applying Self-Determination Theory and the Technology Acceptance Model as the theoretical foundations, this study examines how the two countries' different cultural perceptions, in terms of psychological factors, and different levels of IT infrastructure, for technological factors, affect online learning. This study's contribution is to compare what factors affect online learning motivation and how the factors affect the two countries differently, as well as to understand the motivating factors in a cross-cultural environment.

## LITERATURE REVIEW

There are existing studies that have used Self-Determination Theory (SDT) and The Technology Acceptance Model (TAM) to predict students' intention to take online classes (Bazelais et al., 2018; Deci et al., 2017; Esteban-Millat et al., 2018; Jenó et al., 2019; Kim et al., 2021; Pal & Panijja, 2020; Ryan & Deci, 2000; Tao et al., 2019). SDT and TAM are integrated to examine the factors affecting students' intention to adopt online classes. While SDT focuses on the psychological aspects of examining how students are affected by intrinsic or extrinsic motivation, TAM focuses on how technological aspects of perceived ease of use (PEOU) and perceived usefulness (PU) affect the students' intention to adopt online classes.

### *Self-Determination Theory*

SDT focuses on the degree to which individual behavior is self-motivated and self-determined (Deci et al., 2017; Ryan & Deci, 2000). The theory explains that competence refers to the need to master tasks and learn different skills as one of the three basic psychological needs of humans and

supports high salience for producing variability in intrinsic motivation (Ryan & Deci, 2000). The theory also posits that a person can be extrinsically or intrinsically motivated (Ryan & Deci, 2000). Intrinsic motivation is the most self-determined form of behavior and involves learning opportunities because they are seen as enjoyable, interesting, or relevant to one's psychological needs. Thus, intrinsic motivation is associated with a high level of effort and task performance. Students with greater levels of intrinsic motivation demonstrate a strong learning desire, high academic achievement, and strong persistence, which leads to high productivity. On the other hand, extrinsic motivation refers to the performance of an activity to attain the desired outcome and an instrumental impetus rather than pursued pleasure or personal satisfaction (Ryan & Deci, 2000).

### *Competence and Extrinsic Motivation (External Regulation and Identified Regulation)*

Competence refers to the ability to interact effectively with the social environment (Jeno et al., 2019). Jenó et al. explained that competence is satisfied when there are optimal challenges, which encourages feedback and feelings of mastery. When students' needs for competence are achieved, students experience motivation (Jeno et al., 2019; Ryan & Deci, 2000). Research has shown that perceived competence positively predicts academic achievement among diverse student samples (Jeno et al., 2019). According to Ryan and Deci (2000), intrinsic motivation is essential, but most performed activities are extrinsically motivated rather than intrinsically motivated. SDT considers that a student's action can be determined by external forces or by the self. Based on the nature of the online learning environment, this study examines the two relevant types of extrinsic motivation: external regulation and identified regulation. External regulation refers to behaviors performed to satisfy an external demand (Ryan & Deci, 2000). Identified regulation involves the person attributing personal importance to the behavior (Ryan & Deci, 2000). External regulation is the most external form of extrinsic motivation that a student can experience. An example of external regulation is when the student attains competency to secure a reward from parents for achieving good grades. This suggests that competence is positively related to external regulation.

American students are motivated to be competent in school due to social concerns (Wentzel, 2000), while Filipinos are motivated to be competent in school due to social status (King et al., 2014). This suggests that American and Filipino students are motivated by external rewards that can be internalized so that these rewards become part of themselves.

H1a: Competence is positively significant to external regulation for both countries.

H1b: Competence is positively significant to identified regulation for both countries.

#### *Extrinsic Motivation (External Regulation, Identified Regulation) and Intrinsic Motivation*

Since academic motivation exists in a continuum from extrinsic motivation to intrinsic motivation, the types of extrinsic motivation such as external regulation and identified regulation may be significant to intrinsic motivation in optimal situations where students feel competent, autonomous, and connected (Ryan & Deci, 2000). Studies have shown that intrinsic motivation tends to increase when students learn the required skills, exercise more autonomy, and feel connected in a caring environment (Zuckerman et al., 1978).

When external rewards of social concern and social status for American and Filipino students, respectively, are consciously valued, these external rewards can motivate American and Filipino students to become more competent (King et al., 2014; Ryan & Deci, 2000; Wentzel, 2000). Since academic motivation exists in a continuum from extrinsic to intrinsic motivation, external regulation and identified regulation can be significant to intrinsic motivation in both cultures when students feel competent (Ryan & Deci, 2000).

H2a: External regulation is positively significant to intrinsic motivation for both countries.

H2b: Identified regulation is positively significant to intrinsic motivation for both countries.

#### *Intrinsic Motivation and Online Learning Goal Orientation*

SDT posits that students become more intrinsically motivated when their needs for competence are met (Zaccoletti et al., 2020). This intrinsic motivation can lead them to pursue tasks to master the online learning environment. According to Maehr (1989), the perceived goal of behavior can be why people undertake certain activities. Among

the perceived goals are tasks/proficiency goals, ego/performance goals, social solidarity goals, and extrinsic reward goals (King & McInerney, 2014). Online learning goals can be considered a task/proficiency goal as these are activities designed to increase one's mastery of online learning (King & McInerney, 2014).

SDT stresses that personal choice encourages intrinsic motivation (Ryan & Deci, 2000). As Americans tend to be more independent, they will exercise their personal choices to achieve their learning goals (Lee & Green, 1991). Although Asian students like Filipinos can be intrinsically motivated to reach their goals, they will learn more when there is trust toward their teachers, who make choices for the students (King & McInerney, 2014).

H3a: Intrinsic motivation has a positive impact on online learning goal orientation

H3b: American (Filipino) students' intrinsic motivation has a higher (lower) significance on online learning goal orientation.

#### *Technology Acceptance Model*

TAM explains an individual's computer usage behavior (Davis, 1989). Two constructs, PEOU and PU, measure the degree of an individual's system usage and perceptions in examining behavioral intention and actual use. Davis (1989) defines PEOU as the degree of required effort to use the application, while PU refers to the extent to which applications improve user performance. Davis et al. (1989) found that PEOU and PU determine people's intentions to use computers. Usefulness beliefs were more salient for inexperienced users than experienced users (Taylor & Todd, 1995).

#### *Perceived Ease of Use, Perceived Usefulness, and Attitude Towards Online Learning*

PEOU and PU have been determinants of attitude to use technology in online learning (Kim et al., 2021; Koufaris & Hampston-Sosa, 2004; Lee & Turban, 2001; Pal & Vanijja, 2020; Tao et al., 2019). Perceived ease of use was significant to perceived usefulness, perceived usefulness was significant to attitude on online learning, and attitude was significant to behavioral intention to adopt online learning (Kim et al., 2021). Esteban-Millat et al. (2018) found that PEOU and PU were positively significant to attitudes towards the online learning of Spanish students. The study of Canadian students showed that PEOU and PU were positively

significant to attitudes towards online learning (Bazelais et al., 2018). Pal and Vanijja (2020) found that TAM's perceived ease of use was significant to Indian students' perceived usability. A similar study in South Korea during COVID-19 showed that TAM could explain the intention to use online learning (Kim et al., 2021).

PEOU and PU were positively significant to Filipino college students as an online learning tool (Dumpit & Fernandez, 2017). Likewise, the study of American students who took online classes showed that service perceptions from individuals such as the teacher, subject coordinator, and IT staff influenced the PEOU and PU of online classes and student satisfaction (Lee, 2010).

H4a: PEOU is positively related to attitude towards online learning for both countries.

H4b: PU is positively related to attitude towards online learning for both countries.

#### *Attitude, Online Learning Goal Orientation, and Intention to Take Online Classes*

SDT posits that students' behavior towards online learning goals can be self-motivated (Ryan & Deci, 2000). Students who find online learning useful and easy to use develop better attitudes towards online learning (Bazelais et al., 2018; Esteban-Millat et al., 2018). This favorable attitude is shown in better performance and efforts to achieve online learning goals (Ryan & Deci, 2000). When students experience satisfaction with their competence, their intention to take online classes will be stronger (Zaccoletti et al., 2020). American college students who showed favorable attitudes towards online classes achieved their online learning goal (Lee, 2010). Likewise, Filipino college students who have positive attitudes towards YouTube are likely to use it as a learning tool if it is easy to use and fun (Dumpit & Fernandez, 2017).

H5: Attitude is positively significant to online learning goal orientation for both countries.

H6: Online learning goal orientation is positively significant to intention to take an online class for both countries.

#### **METHODOLOGY**

In the United States, 223 respondents were recruited on campus from one Northeastern university. In the Philippines, 262 respondents were recruited from a university in Manila. After

agreeing to a consent form, the respondents were invited via email to complete the online survey and all of them completed it with no missing answers. The sample frame is appropriate since online courses are offered at most colleges. The respondents were in the age range 19–24. Questionnaire items measuring competence were adopted from Williams and Deci (1996). The identified regulation and external regulation were adopted from Ryan and Connell's (1989) Academic Self-Regulation Questionnaire and modified for the study. The intrinsic motivation scales were adopted from Ratelle et al. (2007) and the online learning goal orientation items were adopted from Elliot and McGregor (2001). Perceived ease of use, perceived usefulness, attitude toward online learning, and intention to take online classes were adopted from Davis (1989) and modified for the study. Attitude toward online learning scale was adopted from Chang's (2011) study and modified for the study by considering online learning perceptions. All items except attitude toward online learning (ATT) were measured on a 7-point Likert scale. The semantic differential scale was used for attitude toward online learning construct.

#### **ANALYSIS AND RESULTS**

##### *Overall Measurement Results*

Internal reliability was tested using Cronbach's Alpha. All measures demonstrate reliability with alpha values of .83 and greater (Table 1 in the Appendix). A Confirmatory Factor Analysis (CFA) was conducted to test the overall validity of the measurement theory. The CFA results show a good model fit for a 36 items and 9 constructs model, with  $\chi^2 = 909.43$ ,  $df = 550$ ,  $p < .00$ ; Comparative Fit Index (CFI) = .98; Root Mean Square Error of Approximation (RMSEA) = .04; Normed Fit Index (NFI) = .94; the Tucker-Lewis Index (TLI) = .97. The CFI and NFI exceed the recommended cut-off point ( $> .90$ ), and the RMSEA is also below the cut-off level ( $< .080$ ).

For construct validity, convergent and discriminant validity were tested. It is suggested based on the factor loading estimates, composite reliabilities, variance extracted, and inter-construct correlations (Hair et al., 2006). All loading estimates are significant ( $p < .00$ ), with the lowest being .73 and the highest being .96. Items with a factor loading of  $< .07$  were removed. The variance

extracted estimates are .67, .70, .64, .77, .72, .84, .63, .75, and .78 for competence, identified regulation, external regulation, intrinsic motivation, online learning goal orientation, PU, PEOU, attitude towards online learning, and intention to take online classes, respectively. Composite reliability estimates are adequate, ranging from .84 to .96. Discriminant validity is measured by comparing the square root of average variance extracted (AVE) to two constructs of the correlation estimate. The AVE is greater than correlations of any two constructs. Thus, the results support the construct validity of the measurement model (Hair et al., 2006). See Table 2 in the Appendix.

#### *Two-group Measurement Model*

For more than one group, before any comparison of the relationships between the variables of the proposed model, metric invariance between American and Philippine samples needs to be examined. Overall, the unconstrained or “totally free” (TF) model fits reasonably well, with  $\chi^2 = 1675.99$ ,  $df = 1100$ ,  $p = .000$ ; CFI = .96; RMSEA = .03; PNFI = 0.78. Next, constraining the measurement weights to be equal between groups, the model fit with  $\chi^2 = 1724.82$ ,  $df = 1127$ , CFI = .96; RMSEA = .03; PNFI = 0.80. The change in  $\chi^2$  by adding these constraints is 48.83 with 27 degrees of freedom ( $p = .006$ ). The results suggest that full metric invariance could not be established.

A subsequent test for partial invariance was run based on two loading estimates for each construct between groups. The model fit with  $\chi^2 = 1695.77$ ,  $df = 1113$ , CFI = .96; RMSEA = .03; PNFI = 0.79. The chi-square difference test results ( $\Delta \chi^2 = 19.79$ ,  $df = 13$ ,  $p = .101$ ) satisfied the conditions for partial metric invariance that allowed valid comparisons of relationships between the U.S. and Philippine samples (Lopez et al., 2009). Finally, the CFA analyses included a test of scalar invariance.

Full scalar invariance was tested by constraining the CFA model. Here, the zero-intercept terms for the measured variables in the Philippine sample would be equal to the matching zero-intercept terms in the U.S. sample. The model produced  $\chi^2 = 1827.67$ ,  $df = 1172$ ,  $p = .000$ , CFI = .96; RMSEA = .03. The change  $\chi^2$  of 151.68 with 72  $df$  (relative to the TF model) was significant ( $p < .001$ ). Since full scalar invariance was not supported, partial scalar invariance was examined. Follow-up tests of partial scalar invariance showed that all factors had

at least two zero-intercept terms that were equal between samples. Thus, a valid factor mean comparison could be made for all factors. Table 3 (in the Appendix) shows the nested model comparisons results.

#### *Two-group Structural Model*

In structural equation modeling, the invariance of parameters across groups is tested by placing constraints on particular parameters (Byrne, 2010). First, an overall structural model fit for the two groups is estimated without any constraints imposed. As in subsequent analyses, the factor loadings, factor variance-covariance matrices, and the unique variances are allowed to be freely estimated across the two groups. Structural equation modeling (SEM) is conducted to examine the overall theoretical model specification.

The one group model provides a satisfactory fit of the data with  $\chi^2 = 1561.60$ ,  $df = 574$ ,  $p = .000$ ; CFI = .93; RMSEA = .06; TLI = .93. Next, the procedures turn to a test of moderation using the country classification variable. The structural invariance model is assessed by constraining all structural coefficients to be equal in both groups. Overall fit measures of the “totally free” model indicate that the model is consistent with the data ( $\chi^2 = 2353.79$ ,  $df = 1148$ ,  $p = .000$ ; CFI = .92; RMSEA = .05). Next, measurement weights are  $\chi^2 = 2375.27$ ,  $df = 1161$ ,  $p = .000$ ; CFI = .92; RMSEA = .05. Constraining the structural weights indicate  $\chi^2 = 2413.49$ ,  $df = 1184$ ,  $p = .000$ ; CFI = .92; RMSEA = .05. The results indicate that the moderation model is significantly different from the metric invariance model ( $\Delta \chi^2 = 38.22$ ,  $df = 23$ ,  $p = .024$ ). Thus, it indicates the model is moderated by country.

#### *Hypotheses Test*

The SEM structural paths show that all constructs are positively related in both samples except the relationship between external regulation and intrinsic motivation (See Figures 1 and 2 in Appendix). Competence is positively significant to external regulation for both countries (U.S.  $\beta = .42$ ,  $t = 5.87$ ; Philippines  $\beta = .23$ ,  $t = 3.61$ ). Competence is positively significant to identified regulation for both countries (U.S.  $\beta = .49$ ,  $t = 7.0$ ; Philippines  $\beta = .44$ ,  $t = 6.74$ ). Thus, H1a and H1b are supported.

External regulation is negatively significant to intrinsic motivation for Filipino respondents ( $\beta = -.16$ ,  $t = -2.98$ ), but there is no significant

relationship for Americans. Identified regulation is positively significant to intrinsic motivation for both countries (U.S.  $\beta = .48$ ,  $t = 6.86$ ; Philippines  $\beta = .65$ ,  $t = 10.50$ ). Thus, H2a is not supported, but H2b is supported. Intrinsic motivation is positively significant to online learning goal for both countries (U.S.  $\beta = .38$ ,  $t = 5.89$ ; Philippines  $\beta = .45$ ,  $t = 7.46$ ). H3a is supported, while H3b is not supported.

Perceived ease of use is positively significant to attitude toward online learning for both countries (U.S.  $\beta = .44$ ,  $t = 5.35$ ; Philippines  $\beta = .35$ ,  $t = 4.59$ ). Perceived usefulness is positively significant to attitude toward online learning for both countries (U.S.  $\beta = .29$ ,  $t = 3.91$ ; Philippines  $\beta = .44$ ,  $t = 6.14$ ). Thus, H4 a and H4 b are supported. Attitude toward online learning is positively significant to online learning goal for both countries (U.S.  $\beta = .31$ ,  $t = 4.94$ ; Philippines  $\beta = .41$ ,  $t = 6.79$ ). Online learning goals is positively significant to intention to take online class for both countries (U.S.  $\beta = .22$ ,  $t = 3.14$ ; Philippines  $\beta = .34$ ,  $t = 5.17$ ). See Table 4 in the Appendix.

## DISCUSSION AND CONCLUSION

The results validate the use of SDT and TAM as theoretical frameworks in understanding the students' intention to take online classes and their differences based on cultural values and beliefs (Ryan & Deci, 2000; Zaccoletti et al., 2020). The findings explain that competence is positively significant to external regulation and identified regulation in both countries. Previous studies (Jeno et al., 2019; Ryan & Deci, 2000; Sun et al., 2019) explain that students master their tasks because of an external reward. These findings imply that competence positively affects external regulation. Identified regulation is positively related to intrinsic motivation in the two countries. However, external regulation is not significant to intrinsic motivation for the American respondents, while external regulation is negatively significant to intrinsic motivation for Filipino respondents. As Americans tend to be more independent and individualistic, they will exercise their personal choices to achieve their learning goals (Hofstede Insights, 2021; Lee & Green, 1991). Thus, Americans tend to be guided by personal needs and self-interests rather than external rewards to achieve their goals (Hofstede Insights, 2021; Lee & Green, 1991). Although Filipinos are intrinsically motivated to

reach their goals, an external reward negatively impacts their intrinsic motivation because Filipinos tend to learn more when there is trust toward teachers (King & McInerney, 2014). It also implies that Filipinos, who belong to a collectivistic culture, may excel in school to please their teachers and families (Bissessar, 2018; Hofstede Insights, 2021). Intrinsic motivation is positively significant to online learning goals in both countries. This finding supports existing studies that an intrinsically motivated student can pursue tasks to master the online learning environment (King & McInerney, 2014; Maehr, 1989; Zaccoletti et al., 2020).

Perceived ease of use and perceived usefulness are positively significant to attitude towards online learning in both countries. The results are supported by previous studies on the importance of these variables in students' adoption of online classes (Bazelais et al., 2018; Esteban-Millat et al., 2018; Gefen & Straub 2004; Kim et al., 2021; Koufaris & Hampston-Sosa, 2004; Lee & Turban, 2001; Pal & Vanijja, 2020; Tao et al., 2019). Attitude toward online learning is positively significant to online learning goal orientation in both countries. Further, online learning goal orientation is positively significant to intention to take an online class. A favorable attitude towards online learning shows better efforts to achieve a set goal (Ryan & Deci, 2000). The online learning goal orientation strengthens student's intention to take online classes (Zaccoletti et al., 2020).

This study explains that psychological and technological aspects are essential to increase online learning goals and intention to take online classes for the Philippines and the United States. For psychology aspects, Filipino students show stronger relationships among identified regulation, intrinsic motivation, and online learning goals than do American students. These findings imply that psychological factors might be more important for the Philippines than the United States.

Based on the result, perceived usefulness has a stronger impact on attitude for Filipino students, whereas perceived ease of use has a stronger impact on attitude for American students. In comparison to the United States, the Philippines is faced with infrastructure challenges where some students do not have stable internet connectivity or do not have ownership of a computer. Thus, the result suggests that to fill the gap between providing quality

education and limited resources such as the infrastructure, the available learning platforms need to be useful. In other words, between the ease of use and usefulness, Filipino students prioritize the usefulness of the learning platform more than the ease of use. On the other hand, American students view the ease of using technology to be more important than the usefulness. As managerial implications, encouragement and enjoyment can increase student online learning motivation for both countries. In addition, when American educators create online courses, the courses should be user-friendly. On the other hand, Filipino educators need to emphasize the usefulness of online courses to the students' education.

Some studies examined how culture affects the student's motivation to take online classes (King & McInerney, 2014). However, there is a lack of cross-cultural studies that examine student motivation in different levels of the IT environment. This study contributes insights into how young students from a collectivist country and an individualistic country with different levels of IT infrastructure intend to adopt online classes.

This study has limitations. There are only two countries (U.S. and Philippines) that were examined. Future studies could investigate the impact of students' socio-economic status to determine whether that serves as a moderating factor between their motivation and attitude to learn online. This study examined students' motivation toward online classes in general. However, with the introduction of different types of online learning, including hybrid, blended, synchronous, and asynchronous, future studies examining students' motivation toward taking different types of online classes could be beneficial in advising students based on their motivations and learning preferences.

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## APPENDIX

Figure 1. U.S. Findings

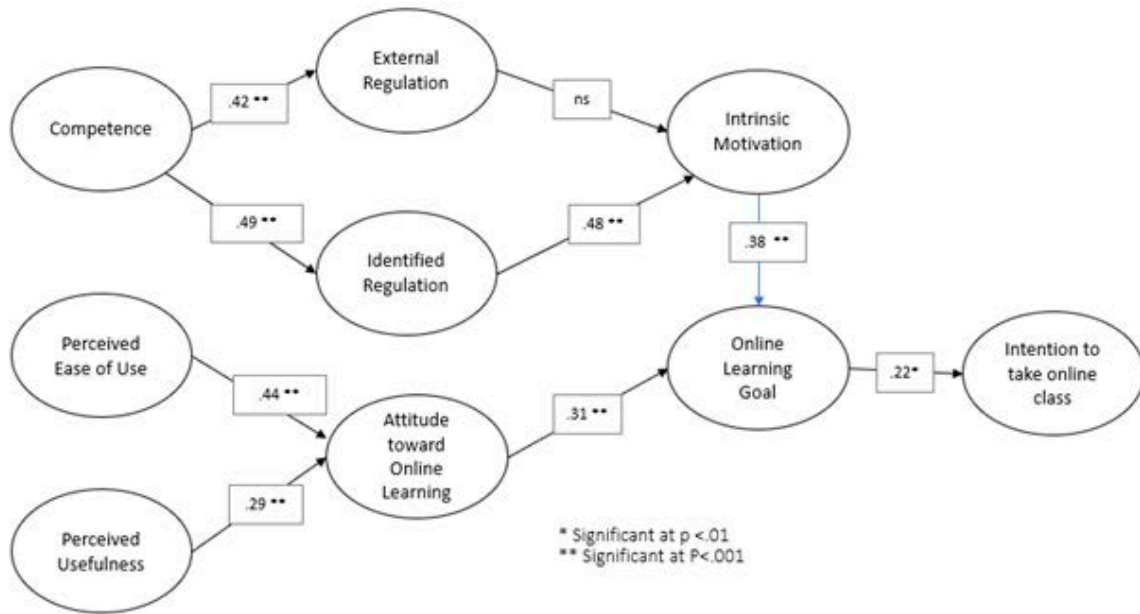


Figure 2. Philippines Findings

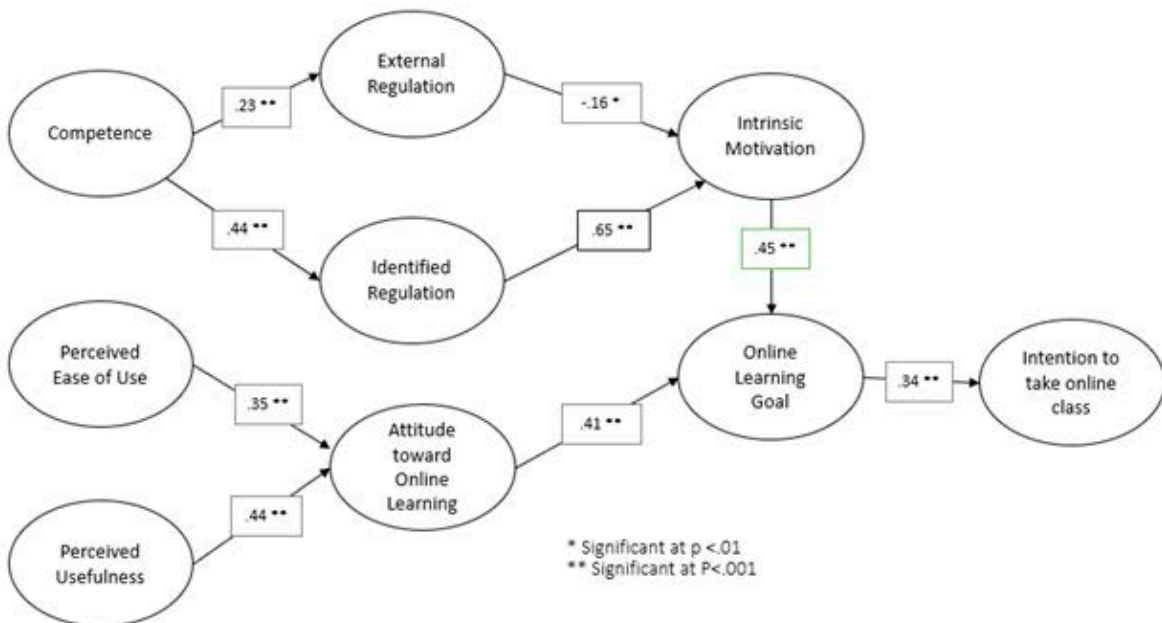


Table 1. Measurement Items and Internal Consistency

		Factor loading	Coefficient Alpha
COM1	I am pretty skilled at learning performance.	.880	
COM2	I feel confident in my ability to learn something.	.858	
COM3	I feel I am able to meet the challenge of learning well	.824	
COM4	I think I am pretty good at learning.	.801	
COM5	I am able to achieve my goals in learning.	.800	
COM6	I am satisfied with my learning performance.	.729	.929
IRE1	I take classes because I believe that an education will improve my competence as a worker.	.874	
IRE2	I take classes because eventually it will enable me to enter the job market in a field that I like.	.799	
IRE3	I take classes because I think that a college education will help me better prepare for the career I have chosen.	.790	
IRE4	I take classes because this will help me make a better choice regarding my career orientation.	.879	.908
EXRE1	I go to school in order to have a better salary later on.	.940	
EXRE2	I take classes because I need at least a college diploma in order to find a high-paying job later on.	.762	
EXRE3	I go to school because I want to have "the good life."	.681	.832
INM01	I go to school for the pleasure I experience when I discover new things never seen before.	.900	
INM02	I go to school for the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	.946	
INM03	I go to school because I experience pleasure and satisfaction while learning new things.	.820	
INM04	I go to school because my studies allow me to continue to learn about many things that interest me.	.828	.933
OGO1	It is important for me to understand the content of online courses as thoroughly as possible.	.835	
OGO2	I hope to have gained a broader and deeper knowledge of psychology in an online class.	.879	
OGO3	I desire to completely master online course materials presented in classes.	.822	
OGO4	I want to learn as much as possible in an online class.	.861	.903
PU1	I think I can enhance my learning proficiency when I take an online class.	.956	
PU2	I think I can improve my learning performance when I take an online class.	.926	
PU3	I think I can increase my learning productivity when I take an online class.	.903	
PU4	I think taking online classes helps me learn.	.887	.955
PEU1	In general, I feel taking online classes is easy to.	.840	
PEU2	It is easy to get familiar with an online learning system.	.731	
PEU3	I feel online learning is easy to handle when I encounter a problem.	.807	.832
	For me, online learning is		
ATT1	Negative feeling/Positive feeling	.889	
ATT2	Unpleasant /Pleasant	.850	
ATT3	Bad/Good	.828	
ATT4	Unappealing/Appealing	.898	.922
INT1	I will choose an online class If I have to take a class.	.838	
INT2	I would use an online learning system for my studies.	.816	
INT3	I am very likely to take online class(es).	.932	
INT4	I would not hesitate to take online class(es).	.931	.937

COM: competence, IRE: Identified regulation, EXRE: External regulation, INMO: Intrinsic motivation, OGO: Online learning goal orientation, PU: Perceived usefulness, PEU: Perceived ease of use, ATT: Attitude toward online learning, INT: Intention to take online class

Table 2. Correlation Matrix, CR, AVE, Convergent Validity, and Discriminant Validity

	CR	AVE	COM	IRE	EXRE	INMO	OGO	PU	PEU	ATT	INT
COM	.94	.67	<b>.820</b>								
IRE	.93	.70	.424	<b>.837</b>							
EXRE	.84	.64	.290	.565	<b>.802</b>						
INMO	.93	.77	.355	.519	.197	<b>.875</b>					
OGO	.91	.72	.355	.531	.274	.439	<b>.850</b>				
PU	.96	.84	.228	.227	.124	.200	.554	<b>.918</b>			
PEU	.84	.63	.287	.160	.202	.175	.363	.613	<b>.794</b>		
ATT	.92	.75	.194	.123	.070	.114	.370	.582	.621	<b>.876</b>	
INT	.93	.78	.097	.018	.043	.030	.259	.626	.696	.673	<b>.881</b>

CR: Composite Reliability; AVE: Average Variance Extracted;

Note: The square root of Average Variance Extracted ( ) is indicated **bold**.

Table 3. Comparative Model Fit Results

	Overall	USA	Philippines	2-Groups	2-Groups	2-Groups	
	Sample	Sample	Sample	TF	LX=IN	PH=IN	TX=IN
$\chi^2$	909.43	869.87	806.05	1675.99	1695.77	1827.67	2064.64
df	550	550	550	1100	1113	1172	1216
CFI	0.98	0.96	0.97	0.96	0.96	0.96	0.94
RMSEA	0.04	0.05	0.04	0.03	0.03	0.03	0.04
PNFI	na	na	na	0.78	0.79	0.83	0.84

Table 4. Comparisons of Standardized Coefficients and t-values between Constructs

		Standardized Coefficients				t-values	
		US		Philippine		US	Philippine
H1a	COM → EXRE	.42	P<.001	.23	P<.001	5.87	3.61
H1b	COM → IRE	.49	P<.001	.44	P<.001	7.00	6.74
H2a	EXRE → INMO	-.02	n.s	-.16	P<.01	-.20	-2.98
H2b	IRE → INMO	.48	P<.001	.65	P<.001	6.86	10.50
H3ab	INMO → OGO	.38	P<.001	.45	P<.001	5.89	7.46
H4a	PEU → ATT	.44	P<.001	.35	P<.001	5.35	4.59
H4b	PU → ATT	.29	P<.001	.44	P<.001	3.91	6.14
H5	ATT → OGO	.31	P<.001	.41	P<.001	4.94	6.79
H6	OGO → INT	.22	P<.01	.34	P<.001	3.14	5.17