

ACADEMIC ENGAGEMENT PREDICTS FLOURISHING AMONG STUDENTS IN ONLINE LEARNING SETUP: THE MEDIATING ROLE OF PSYCHOLOGICAL NEEDS

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Abstract

Education is now constantly evolving brought about by the threats of COVID-19 pandemic. Various measures have been implemented to reduce face-to-face contact including transitioning from live classes to online or distance learning programs. The extant literature suggests that the COVID outbreak as well as the abrupt transition to remote learning may cause psychological distress to the affected population. This research aims to uncover if student participation and engagement in the online classroom even during adversity can lead to flourishing. It was also investigated if the fulfillment of psychological needs plays a role in this relationship. There were 380 students (242 females, 125 males) who participated in the online survey. The analyses revealed that academic engagement was directly and indirectly linked to higher levels of flourishing among learners. It was also discovered that the fulfillment of the needs for autonomy, competence and relatedness explain how engagement led to well-being. With these findings, it can be argued that student participation in classroom activities even in unprecedented times considered as an important avenue in satisfying psychological needs which in turn leads to optimal psychological functioning. The theoretical and practical implications of these findings were also discussed.

Keywords: engagement; flourishing; needs; well-being

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Introduction

The world has been shifting day by day due to the global health crisis brought about by COVID-19 pandemic. The threats worsen the way of living of people in various counties around the globe and had to resort to serious circumstances. Education is one of the most affected sectors in the society. Schools are halted their operation in attempt to lessen the transmission of infection. On the other hand, this plan had already been used when another health threat arose in the world, however, this time is considered the worst scenario among schools from all over the world because of the forced shut down (UN News, 2020b). This situation absolutely affects the lives of 191 counties, 1.5 billion students and 63 million educators. Majority of the countries have shifted to online distance learning setup to continue the quality delivery of education despite the odds. Based on the recent news cascaded, there are around 830 million learners worldwide are out of school (UN News, 2020a). Some of them have difficulty accessing computers and internet due to lack of facilities available at home. In the Philippines, there are nearly 3 million Filipino students are out-of-school (Adonis, 2020). In this case, students are either abruptly dropping from school by not attending classes or by not appearing at all in their online sessions. The sentiments of Filipino learners show that the Philippine educational system may not be ready for online learning after all but it is a must in order to attain literacy in the period of time (Pastor, 2020). These challenges resulted to various consequences. The increase of students' sudden dropouts from the school, demotivation and lack of interest become the factors to discontinue their study. At this point, learners and educators are not only battling the pandemic they are also facing the myriad of challenges that emerged in the sudden transition of education into online distance setup.

In attempt to slow down the virus transmission in the Philippines, each school had to abruptly shift its modalities from face-to-face classes to distance education (Department of Education, 2020). As mentioned earlier, some students are not capable of attending school due to various reasons. Moreover, it is concluded that not only the learners but also the teachers are experiencing difficulties in adapting technology-enabled education. This is true not only the Philippines suffers this condition but also the other countries. For instance, Sari and Nayir (2020) investigated the challenges faced by educators and administrators in Turkey. The difficulties encountered by the participants can be

categorized under the following themes: technology and infrastructure, difficulty communicating with students, unprepared students, student attitude, lack of training in distance education, negative attitude towards online education and other problems brought about by the school or management. In a related study, Vigil, Marian, and Szabo (2020) concluded that aside from technical concerns educators may also differ when it comes to skills necessary in delivering online courses. Thus, some instructors especially those who lack experience may struggle in this sudden transition from face-to-face to distance learning. This struggle also affects the learners under their supervision.

In a research conducted by Baticulon et al. (2020) cascaded that similar concerns were also found in a this local study. It was identified the difficulties encountered by the students include technological barriers (*e.g.*, lack of technical skills), individual barriers (*e.g.*, adjustment, mental health difficulties), domestic barriers (*e.g.*, family conflict), institutional barriers (*e.g.*, inadequate skills of the educators) and community barriers (*e.g.*, power interruptions). Furthermore, since this transition occurred suddenly, the schools and the universities may not be ready to implement this kind of approach (Pastor, 2020). Therefore, it can be argued that the difficulties posted by the current pandemic as well the sudden transition to distance learning can result to various psychological difficulties. The existing literature has already established that Filipinos have psychological concerns in interfacing the COVID-19 threats (Montano & Acebes, 2020; Nicomedes & Avila, 2020). Hence, it can also be concluded that the current delivery of education in the Philippines becomes more difficult to all levels of learners. They tend to lessen their focus on schooling due to the challenges they face. This is discussed in detail in the next subsection.

Academic engagement and well-being

Academic engagement refers to a collection of classroom behaviors including participating in tasks, writing, reading silently and aloud, talking about academics, asking questions, etc. (Greenwood, Horton, & Utley, 2002). These behaviors contribute to academic success of students. They are also considered as alterable variables since they are the products of how the teacher arranges instructional opportunities for students. They can also be considered as *enablers* or *promoting* skills.

Fredricks, Blumenfeld, and Paris (2004) believed that engagement is the degree of a student's involvement in academic matters. It has three categories:

behavioral, emotional, and cognitive categories. Behavioral engagement involves effort, persistence, attention, contribution to the class and concentration. Emotional engagement includes the affective reactions of the pupil such as boredom, interest, happiness, anxiety, and sadness. Cognitive engagement can be defined by one's tendency to go beyond the requirements and to prefer challenge. In Fredericks et al.'s (2004) review, it is noted that engagement may be a protective factor in preventing students from risk of dropping out. This means that engagement has been shown to be a predictor of optimal psychological outcomes such as subjective well-being (SWB).

In the study conducted by Lewis, Huebner, Malone, and Valois (2011) revealed that life satisfaction and engagement have a bidirectional relationship in a 5-month longitudinal study. In other words, students who are happier had higher levels of engagement while those with lower SWB are more likely to experience psychological disengagement. This was eventually supported by Datu and King (2018) who showed that SWB and its facets are correlated with overall academic engagement and vice versa. Specifically, those with higher engagement also report higher life satisfaction, more positive emotions, and less negative emotions, strengthening the link between academic engagement and SWB. These studies also indicated that engagement can be a predictor and at the same time an outcome variable of SWB and its facets (*e.g.*, positive emotions).

One possible explanation as to how academic engagement leads to optimal psychological outcomes is the fulfillment of psychological needs. Self-Determination Theory (SDT) suggests that motivation is appraised because it leads to valuable psychological outcomes (Ryan & Deci, 2000). Specifically, the proponents of SDT have identified three needs namely autonomy, competence, and relatedness which were identified as facilitators of optimal functioning and well-being. Furthermore, Ryan and Deci (2000) argued that the satisfaction of the three needs throughout one's life is necessary to attain a sense of well-being or "eudaimonia". On the other hand, if a person engages in behaviors that do not satisfy the three needs (*e.g.*, materialistic needs), then ill-being may be experienced. Hence, the person should seek situations or engage in behaviors that facilitates the satisfaction of the three basic psychological needs to attain well-being.

In the review made by Niemiec and Ryan (2009) applied SDT principles to educational practice, showing that practices that support or facilitate the satisfaction of the psychological needs lead to outcomes such as learning, good

academic performance and well-being. These practices include explaining rationales, providing challenge, making constructive feedback, and building a cooperative learning community in the classroom (Reeve & Halusic, 2009). Thus, if a situation or environment allows one to feel competent, autonomous, and related, then there is a higher chance that the learner will report a higher amount of well-being.

To understand student's engagement in the context of SDT, it is important to acknowledge that students have inner resources that influence them to engage constructively in a learning environment. The learning environment at the same time should allow the learner to fulfill the three basic psychological needs in order for them to maintain motivated (Reeve, 2012). Therefore, there is a bidirectional relationship between motivation and well-being. The extant literature is showing that it pays to fuel student motivation since it leads to optimal outcomes and these outcomes, in turn, maintain the engagement shown by the learner.

Flourishing

In the previous page, it was established that academic engagement is a predictor of subjective well-being. Well-being is characterized by optimal psychological functioning and experience (Ryan & Deci, 2001). In the review by Ryan and Deci, they highlighted that there are two traditions in the study of well-being: hedonic and eudaimonic. Hedonia refers to the experience of pleasant emotions or the feeling of happiness while eudaimonia is characterized by positive psychological functioning which includes concepts such as self-actualization, curiosity, flow, growth and meaning in life while there are two existing traditions integrated to conceptualization of the well-being referred to as flourishing (Henderson & Knight, 2012). Keyes (2002) characterized flourishing individuals as people who are free from mental disorders instead of languishing. Hence, flourishing can be viewed as the combination of both hedonic and eudemonic views of well-being - feeling good and functioning effectively at the same time.

Some would argue that flourishing is interchangeable with the concept of psychological well-being (*e.g.*, Ryan & Deci, 2001). One existing measure of well-being was developed by (Diener et al., 2010). In the 8-item measure, flourishing is characterized by success in the following areas such as self-esteem, purpose, optimism, and relationships. Since Ryan and Deci (2000) argued that

satisfaction of psychological needs helps one attain optimal psychological functioning, it is logical to reason that the same needs can be a predictor of flourishing. In the previous study of Mesurado, Salanga, and Mateo (2016) it was proven that the satisfaction of the psychological needs led to higher well-being among Filipino university students. The present study will try to determine if this phenomenon continues to be true even in the present situation.

Flourishing can be an outcome, but it can also be a predictor of other optimal outcomes. Flourishing students are more likely to perform better in the classroom (Van Zyl & Rothmann, 2012). It also predicted the students' tendency to adopt a mastery goal orientation (instead of performance goals) and to practice delay of gratification (Datu, Labarda, & Salanga, 2020). Hence, it pays to engage in activities that makes one experience well-being because flourishing itself is not the outcome as it can also be a pathway towards other optimal states and experiences. It also appears that certain types of learning environments can help one flourish which, in turn, can help one succeed in various areas of functioning, such as academics.

The present study

A number of previous studies have established that during the COVID-19 pandemic, people are not just only bothered by the threat to physical health, but they are also experiencing psychological disturbances (Rossi et al., 2020). There are also findings showing that COVID stress predicted depression, anxiety, and stress symptoms among Filipino (Montano & Acebes, 2020). Students have been identified as a very vulnerable group to experience psychological disturbance in this difficult circumstance. Moreover, the schools, colleges and universities may be facing some challenges in this abrupt transition (Pastor, 2020) which could make this a challenging situation for teachers and students.

The present study assessed if the students enrolled in an online learning program could still experience the optimal psychological state of flourishing. Specifically, this outcome variable was investigated in the context of academic engagement. Since the current study adopted the theoretical framework of SDT, it was investigated if the fulfillment of the needs for autonomy, relatedness and competence explains the relationship between academic engagement and flourishing. This paper sought the answers to the following questions: (1) Does academic engagement predict flourishing? (2) Does the fulfillment of

psychological needs mediate the relationship between academic engagement and flourishing?

Objectives

The objective of this study is to determine if academic engagement among learners could lead to flourishing through the satisfaction of psychological needs. The findings in this research extended the existing research findings about the application of SDT in education. The secondary objective in conducting this research is to help learners and educators understand the importance of student participation in the classroom even during adversity. This study exemplified the importance of providing opportunities for learners in fulfilling their needs for competence, autonomy, and relatedness even in distance learning. For learners, this would help them understand the importance of engagement in attaining optimal psychological health. In line with these objectives, the following hypotheses were tested:

1. academic engagement positively predicted flourishing;
2. the relationship of academic engagement and flourishing was mediated by the fulfillment of the three psychological needs.

Method

Participants

The majority participants were recruited from a local university in exchange for course credits. Other respondents were recruited using the social media as a platform by sharing the survey link. In selecting the participant, the following criteria were considered, the students were (1) currently enrolled in a distance learning program in a university or any academic institution and (2) must be at least 18 years old. The survey was administered using Google Forms. Due to the existing health protocols and current guidelines aligned to COVID 19 circumstances, the pen-and-paper administration was not utilized to avoid face-to-face contact with the respondents. There were 380 participants who answered the survey ranging the age from 17 to 41. The nine participants who belonged to the bracket of 17 years of age were removed from the final analysis. The final count of the participants was 371 with a mean age of 19.7 (SD=2.57). There were 242 female and 125 male participants. Four of them agreed not to disclose their gender. Majority of the respondents belonged to college freshmen with (58.8%)

followed by the non-freshmen with (32.9%). There were also participants coming from senior high school, graduate school, and medical school departments. The exact numbers were exhibited in Table 1. All the procedures in this study complied with the principles of the Declaration of Helsinki, and all the participants signed an online voluntary-informed consent prior to study onset.

Table 1. Distribution of participants according to educational level

Educational Level	N	%
Senior High School	5	1.3%
College (Freshman)	218	58.8%
College (Non-freshman)	122	32.9%
Master's	19	5.1%
Doctoral	2	0.5%
Graduate School (Unspecified)	1	0.3%
Medical School	3	0.8%
Review School	1	0.3%

Measures

Academic engagement. Engagement was measured using the *Utrecht Work Engagement Scale-Student Survey* (UWES-S) by Schaufeli et al. (2002). The UWES-S is a measure of engagement for students that has three subdomains, namely dedication (*e.g.*, “I am enthusiastic about my studies”), absorption (*e.g.*, “I can get carried away by my studies) and vigour (*e.g.*, “When I study, I feel like I am bursting with energy”). In this research, dedication ($\alpha=.81$) and vigour ($\alpha=.84$) had good reliability coefficients while absorption only has a coefficient of .67. In the present research, the composite score of the UWES-S was computed to obtain an overall engagement score. It has a Chronbach's alpha coefficient of .91.

Psychological needs. The *Basic Needs Satisfaction in General Scale* (BNSG-S) was used to measure the level of fulfillment of the three psychological needs proposed by SDT. It is a 21-item tool rated from 1 (Not at all true) to 7 (Very true). The reliability coefficients of the domains of autonomy, competence and relatedness are .61, .58 and .73 respectively. There was a total of 9 reversed scored items. This may explain why the reliability coefficients are not that high for autonomy and competence subscales.

Flourishing. Flourishing was measured using the *Flourishing Scale* by Diener et al. (2009). It is composed of eight items that includes questions such as “I lead a purposeful and meaningful life”. It is rated from 1 (strongly disagree)

to 7 (strongly agree) and the total scores range from 8 to 56. It yielded a reliability coefficient of .90 in the present study.

Data analysis

The data gathered through Google Forms were downloaded and analyzed using SPSS version 23. First, descriptive statistics and correlation analyses were utilized. For the mediation analyses, SPSS Process Macro by Hayes was utilized. Model 4 was selected for the mediation analyses in the present study. The procedures proposed by Preacher and Hayes (2008) were followed in this paper.

Results

Exploratory descriptive statistics was utilized to compute for the means and standard deviations of the scores in the various measures. Then, Pearson-r was utilized to determine how the variables relate with each other. This can be seen in Table 2. It is evident that vigor ($r=.50$, $p<.001$), dedication ($r=.56$, $p<.001$), absorption ($r=.38$, $p<.001$) and the composite score of UWES ($r=.54$, $p<.001$) are all significantly positively associated with flourishing. The scores in autonomy ($r=.46$, $p<.001$), competence ($r=.60$, $p<.001$) and relatedness ($r=.52$, $p<.001$) subscale of the BNSG-S are also positively correlated with flourishing.

Table 2. Summary of intercorrelations, means and standard deviations for scores on UWES, BNSG-S and Flourishing Scale

	1	2	3	4	5	6	7	8
1. UWES Vigor	—							
2. UWES Dedication	.77*	—						
3. UWES Absorption	.80*	.63*	—					
4. UWES Composite Score	.96*	.89*	.87*	—				
5. Autonomy	.30*	.33*	.23*	.32*	—			
6. Competence	.40*	.44*	.31*	.43*	.48*	—		
7. Relatedness	.29*	.35*	.23*	.32*	.53*	.49*	—	
8. Flourishing	.50*	.56*	.38*	.54*	.46*	.60*	.52*	—
<i>M</i>	22.32	22.55	15.92	60.79	31.79	26.36	37.85	44.45
<i>SD</i>	6.17	4.96	3.86	13.64	5.09	5.06	7.17	7.89

Note: * $p<.001$

To determine if engagement has a direct and indirect impact to flourishing through autonomy, competence and relatedness, a series of regression analyses were utilized. It was hypothesized that academic engagement will positively predict flourishing and this relationship will be mediated by the

SDT needs. Results reveal that engagement is positively associated with flourishing, $B=.312$, $t=12.46$, $p<.001$. The mediators, relatedness ($B=.236$, $t=4.82$, $p<.001$) and competence ($B=.513$, $t=7.30$, $p<.001$) also had significant positive impact on flourishing. Autonomy, on the other hand, did not significantly predict the dependent variable ($B=.134$, $t=1.93$, $p=.054$). For the indirect relationships, it was revealed that academic engagement had a significant indirect relationship with flourishing through autonomy ($B=.0156$, 95% CI [.001-.033]), competence ($B=.0811$, 95% CI [.054-.111]), and relatedness ($B=.038$, 95% CI [.023-.059]). The confidence intervals of the three indirect relationships did not contain zero. It is important to note engagement still has a significant main effect on flourishing even while controlling for the three mediating variables, ($B=.178$, $t=7.6$, $p<.001$). These results can be visualized in Figure 1.

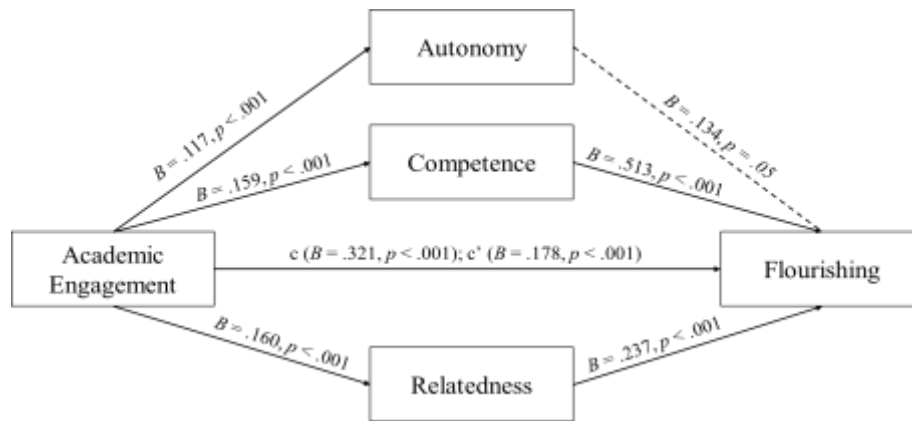


Figure 1. Results of mediation analyses

The results support the hypothesis that academic engagement has a significant positive impact on flourishing. It also confirmed the hypothesis that engagement was also indirectly related with flourishing through the three psychological needs of competence, and relatedness. These findings show that the engagement in academics has a direct and indirect relationship with well-being which could be explained by the fulfillment of the basic psychological needs. Engagement in schooling allows one to satisfy the needs for competence and relatedness needs and this leads to optimal psychological functioning. This

is in line with the assumptions of SDT and it corroborates with the findings of other similar empirical studies conducted before the implementation of online learning. This suggests that the assumptions of SDT - that the fulfillment of psychological needs leads to well-being - remains true even in the most difficult situations. However, the same cannot be said for the need for autonomy since it did not significantly mediate the link between engagement and flourishing. The implications of these findings were discussed in the next section.

Discussion

The purpose of this study is to determine if academic engagement is a predictor of flourishing among students who were enrolled in the online distance learning program in a university. This type of arrangement was not usually practiced in the Philippine setting, but it must be adapted due to the COVID-19 pandemic. The extant literature suggest that mental health might be compromised during a global pandemic (Tandon, 2020). This was also proven to be true among Filipinos during the earlier phases of the lockdown (Montano & Acebes, 2020). The present study explored the possibility of the students to flourish or to achieve optimal psychological functioning in a challenging environment being enrolled in a distance learning programs amidst the pandemic. It could also be stated that the transition from face-to-face class to online learning has been abrupt in the Philippine setting which can make it challenging for both learners and educators. This study explored if students have the capability to academically participate and if this predicts optimal psychological functioning. Moreover, it was also explored if this relationship was mediated by the fulfillment of the psychological needs for autonomy, competence, and relatedness.

It was hypothesized that there was a positive relationship between academic engagement and flourishing. This hypothesis was supported in the analyses which shows that students who were more academically engaged in their studies, characterized by being highly dedicated, vigorous, and absorbed in the various tasks were also more likely to report higher levels of flourishing or well-being. Once again, flourishing in this study is characterized by success in various areas such as relationship, daily activities, optimism and meaning in life. This means that students who are participative in their schooling, despite the existing the challenges in distance learning programs are more likely to report

success in the various areas of flourishing. Furthermore, it was also revealed the fulfillment of basic psychological needs act as mediators in this relationship. Hence, it could be argued that even in a challenging environment, academic engagement still leads to flourishing because it helps the learners fulfill the basic psychological needs. Engagement in school activities allows one to feel competent and related to others which, in turn, becomes important ingredients in achieving well-being. On the other hand, students who choose not to engage or those who are not able to engage academically are also less likely to report higher levels of flourishing. Perhaps this is because they miss out on schooling which has been established to be an important source of competence, autonomy, and relatedness (Niemiec & Ryan, 2009; Reeve, 2012).

The present study is anchored on Self-Determination Theory by Ryan and Deci (2000). Research work in various settings has consistently shown that fulfillment of psychological needs, may it be in educational (Niemiec & Ryan, 2009; Reeve, 2012) or in work (Deci, Olafsen, & Ryan, 2017) setting, leads to various optimal outcomes including good performance, higher well-being, greater commitment, and better physical as well as psychological health. The significant positive relationship of psychological needs and engagement support the findings of existing research (Babenko, Mosewich, Abraham, & Lai, 2018; Benlahcene, Kaur, & Utara Malaysia, 2020; Curran & Standage, 2017; Zhen et al., 2017). Moreover, the positive relationship of need satisfaction and well-being is also in line with the results of previous studies (Chang, Huang, & Lin, 2015; Martela & Ryan, 2016; Tian, Chen, & Huebner, 2014; Tian, Pi, Huebner, & Du, 2016). Moreover, similar to the findings of Mesurado and colleagues (2016), it was shown that autonomy had the weakest relationship with flourishing. This somehow supports the arguments of Mesurado et al. (2016) that the need for autonomy is not that prominent in a collectivistic culture. Perhaps more studies are needed to understand the role of autonomy in the psychological functioning of learners in collectivistic settings.

Theoretical and practical implications

The assumptions of SDT as well as the existing literature were supported by the findings of the present study. The challenges presented by the current educational setup have resulted to student dropouts or other types of behavioral disengagement. But there are students who continue to attend online classes

despite all the existing challenges brought about by the COVID-19 pandemic. The present undertaking has shown that school attendance can be rewarding for the learner since it can be a pathway towards flourishing. Specifically, this happens because schooling facilitates behaviors that helps one fulfill the psychological needs for autonomy, competence, and relatedness. Hence, these results suggest that school attendance can be valuable source of psychological fulfillment in these trying times.

For school administrators, may the findings of this study serve as a guide or framework in coming up with student mental health interventions. Schools can create policies or guidelines that focus on increasing student participation and engagement even in distance learning. It is important that these policies support the fulfillment of psychological needs to be effective. Teachers can provide activities that enhance autonomy, competence, and relatedness by providing challenging but attainable tasks and by encouraging collaboration among learners. Students, on the other hand, are encouraged to adopt an active instead of passive approach in learning since it has been shown in this study as well as in the extant literature that school engagement has a bidirectional relationship with well-being (Datu & King, 2018; Datu, King, & Valdez, 2017).

Limitations

This study is not without limitations. First, although the results show that there was a significant relationship among the variables, it cannot be said that there is a cause-and-effect relationship between them. There might be other variables that can explain this relationship which can be further investigated in future studies. Since the study is quantitative, the actual school behaviors are predictors of positive psychological health. It might be worth exploring which online classroom behaviors such as recitation, asking questions, and working with classmates can be an avenue in achieving high psychological well-being. More so, the demographic characteristics of the respondents were not exhaustively explored. Certain factors such as socioeconomic status, quality of internet connection, availability of academic resources and others could also be included in future studies. Additionally, since the study was only conducted among Filipino students, these results may not be generalizable to other nationalities. It is recommended that a similar study to be conducted to determine if the findings remain true in other parts of the world.

Conclusion

In conclusion, this study has shown that the students' level of academic engagement could be a valuable predictor of better psychological functioning. Distance learning programs offered in various schools and universities may be new for most Filipino students, but the findings of this study show that learners can easily adapt to changes and even flourish in the face of hardship. Similarly, engagement in academics even in online distance setup or blended distance learning programs could be instrumental in fulfilling one's needs for autonomy, competence and relatedness which in turn may lead to higher level of flourishing. The extant literature show that the COVID-19 pandemic (Montano & Acebes, 2020; Nicomedes & Avila, 2020; Tandon, 2020) as well as the abrupt transition to online education (Baticulon et al., 2020; Pastor, 2020; Vigil et al., 2020) can be detrimental to mental health. But even during this crisis, the attainment of well-being is still possible for Filipino students enrolled in distance learning programs. Interestingly, autonomy had a weak association with flourishing. This might suggest that autonomy is not of utmost importance in a collectivist or interdependent culture. It is recommended that future studies investigate the importance of developing autonomy especially among distance learning students. The results of this study may be useful for school officials, researchers, and school psychologists in designing distance learning programs that facilitate student engagement as a way of fulfilling basic psychological needs.

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