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CHAPTER SEVENTEEN

Student Online Learning Experience and Academic Resilience during COVID-19: Exploring the Role of Academic Self-efficacy and Perceived Social Support

Smita Singh, Jie Ying Loh, and Patrick K. F. Lin

ABSTRACT

The present study investigated academic self-efficacy and perceived social support as potential mediators of the relationship between student learning experience and academic resilience. A sample of 187 university students from Singapore ($M_{age} = 21.86$, $SD_{age} = 3.96$; 128 females, 54 males, five undisclosed gender) who had experienced online learning during the COVID-19 pandemic responded to the online study questionnaires. The results showed that the students' online learning experience predicted their academic resilience, and academic self-efficacy and perceived social support emerged as mediators of this link. These findings indicate an essential requirement for robust online learning format in higher education institutes to provide social support and skills that boost students' academic self-efficacy, thereby supporting their academic resilience.

Keywords: Online Learning Experiences in COVID-19 in Singapore, Academic Resilience, Academic Self-Efficacy, Perceived Social Support

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INTRODUCTION

The COVID-19 pandemic, one of the worst global health crisis in a century, has dramatically transformed the lives, functioning, and behaviours of university students. After Singapore went into lockdown on April 7th of 2020, universities were forced to transition entirely to virtual delivery, with little time to prepare lessons and assessments for implementation through online-based platforms (Crawford et al., 2020; Ng, 2021). This unexpected transition required faculty members to adjust and adapt their teaching styles and methods accordingly. At the same time, students were expected to cope with a different learning mode and modality with which they had little or no experience (Bartusevichiene et al., 2021). When matters of life and death are at stake, focusing on academic goals may be more strenuous than ever (Besser et al., 2020). Hence, studying student *academic resilience*—the capacity to navigate challenges and adversities during education—is essential (Ang et al., 2021; Beale, 2020).

Given the uncertain future of the pandemic, there has been a dramatic increase in adoption of online learning in higher education around the world. Multiple researchers have predicted that online education would become a mainstream andnecessary tool for academia going forward (Goh & Sandars, 2020; Palvia et al., 2018; Sobaih et al. 2020). It is therefore imperative to better understand the effects of online learning on students and its implications to develop responsive strategies and recommendations. In the context of social distancing and pandemic-related stress, online learning has caused challenges for real-time interactions among peers, students, and lecturers, leading to a lack of social support for students (Ang et al., 2021; Means et al., 2020). Students therefore must rely more on social support from family, friends, and/or significant others (Mai et al., 2021).

Emerging research into online student learning has highlighted the importance of social support for students to cope with pandemic-related stress (Huang & Zhang, 2021). While external factors like perceived social support are worth exploring, internal factors like self-efficacy—which determines academic resilience (Cassidy, 2015)—also demand attention (Narayanan & Cheang, 2016). To our knowledge, academic resilience has not received much attention in COVID-19-related research. Therefore, the main aim of the current study is to address this gap by examining whether perceived social support and self-efficacy mediate the link between online student learning and academic resilience.

LITERATURE REVIEW

Online Learning Experiences During COVID-19

Before the COVID-19 pandemic, exclusively online learning for local universities was uncommon (Müller et al., 2021). Research from the pre-pandemic period indicates both benefits (Seiver & Troja, 2014) and challenges resulting from online learning (Hodges & et al., 2020; Martin et al., 2017). In a study by Means and colleagues (2020), undergraduates' satisfaction ratings with their courses dropped dramatically (from an original satisfaction rating of 50% to 19%) after the forced shift to online learning. Students' attitudes towards online learning also shape student experiences, as shown by Aguilera-Hermida (2020) who found that student attitudes towards a specific mode of lesson delivery (mainly face-to-face) were correlated with their motivation, cognitive engagement, and self-efficacy for learning.

Lack of motivation was rated as the most pressing challenge that many students faced (Jaggars et al., 2021; Means et al., 2020; Tichavsky et al., 2015). In addition, the lack of daily class routines and studying in non-academic environments due to pandemic lockdowns has exacerbated this by causing a significant loss of focus for many (Ang et al., 2021; Bartusevichiene et al., 2021; Means et al., 2020).

Another frequently cited challenge of online learning is the absence of community building in the learning process (Jaggers et al., 2021). The lack of real-time interaction between students, teachers, and peers can also lead to delays in receiving constructive feedback for learning (Means et al., 2020) and undermine their understanding of the subject matter (Aguilera-Hermida, 2020; Bartusevichiene, et al., 2021; Dodd et al., 2021; Goh et al., 2021; Wut & Xu, 2020). Interviews with teaching staff indicate that online teaching-learning outcomes are more student-dependent than face-to-face learning (Müller et al., 2021), suggesting that students should be more proactive in reaching out to their professors and peers virtually as they might in-person (Goh et al., 2020).

These findings imply that the personal reach of teaching staff and support to students has been limited by the barriers to interaction, characteristic of the virtual setting. It is also evident that the changes to study routines and the learning environment imposed by the pandemic have caused dramatic disruptions to students' motivation and self-regulation. While COVID-19 and it's associated restrictions pose a challenge to student learning, it is also important to examine students' internal factors that determine how they are impacted, such as ability, resilience, and coping skills.

Academic Resilience

Abiola and Udofia (2011) describe resilience as inner strength, competence, optimism and flexibility, comprising an effective coping mechanism for facing adversity. These qualities can minimize the impact of stressful life events and enhance the protective factors that improve one's ability to deal with life's challenges. Academic resilience is a type of resilience specific to the domain of education that promotes better academic achievement, engagement and motivation—even in the face of stressful events that might otherwise cause poor performance or even dropping out (Hwang & Shin, 2018; Martin & Marsh, 2009). Highly resilient students

are also more likely to set higher academic goals, with determination to enhance their skills and knowledge, and may therefore be more adaptive in educational settings (Choo & Prihadi, 2019; Kwek et al., 2013).

Self-regulated learning and self-efficacy are prominent concepts in the literature on academic resilience. Martin and Marsh (2006) have proposed a '5-C' model consisting of five factors that are significant predictors of academic resilience: (1) self-efficacy; (2) commitment (also known as persistence); (3) coordination (i.e., planning skills); (4) control (i.e., a combination of hard work and useful strategies helps one achieve); and (5) composure (i.e., low anxiety). Martin and Marsh (2006) further describe that academically resilient students tend to be highly self-efficient and disciplined, show great perseverance, are good in planning, and low in anxiety.

In the context of the pandemic, it could be argued that academic resilience is more indispensable now than ever. Students are experiencing higher levels of academic stress during online distance learning (Quintiliani et al., 2021), and findings have shown that academic stress can stimulate negative emotions that are detrimental tolearning and cause pessimistic evaluations of the education (Kumalasari et al., 2021).

Kumalasari and Akmal (2021) examined this question in a study of the effects of academic stress and academic resilience on online learning satisfaction. They found that satisfaction decreased with more academic stress, and academic resilience moderated the relationship, buffering against this reduction in satisfaction. Academically resilient students can also respond more adaptively to academic challenges (for example by considering difficulties as opportunities to improve, or maintaining an optimistic belief that things will get better) and accordingly also tend to be more satisfied with their academic experiences (Hwang & Shin, 2018; Meneghel et al., 2019). Interestingly, a study by Ramadhana and colleagues

(2021) highlights converging qualities between people who excel in an online learning environment and those who have high academic resilience. They further found that online learning readiness was predictive of academic resilience.

Academic Self-Efficacy

Academic self-efficacy is defined as a student's beliefs and confidence in their academic skills (Chemers et al., 2001; Khan, 2013). It is also one of the '5-C' characteristics described by Martin and Marsh (2006) as a significant predictor of academic resilience, describing an inherent human ability that can be cultivated as a buffer against stress and adversity (Narayanan & Cheang, 2016). People with high self-efficacy can control their thoughts and emotions when facing challenges, and are thereby more likely to persist in their endeavors and rebuff pessimistic thinking about themselves and their capabilities (Ozer & Bandura, 1990). Simply states, those who do not believe that they can attain their goals will have little motivation to keep trying when faced with difficulties (Hamill, 2003).

Cassidy (2015) showed that academic self-efficacy could predict academic resilience, finding that students with higher self-efficacy responded more positively to statements corresponding to high academic resilience than those with low self-efficacy. Chemers and colleagues' (2001) found that academic self-efficacy correlates positively with higher grades, greater academic expectations, and better performance. Self-efficacy is also crucial in determining how positive a student's online learning experience will be (Albelbisi & Yusop, 2019; Alghamdi et al., 2020). Aguilera-Hermida (2020) found that prior experience with technology use before COVID-19 and attitudes toward online learning couldinfluence students' efficacy beliefs. Thus, the context carries weight in influencing students' academic self-efficacy in online learning as well in traditional classroom learning.

Perceived Social Support

Besides the innate qualities described in the '5-C' model (Martin & Marsh, 2006), academic resilience may also be influenced by external factors such as social support within the individuals' social environment (Permatasari et al., 2021). Positive social support from friends has been shown to act as a buffer for students under stress (Wilks & Spivey, 2010) and can influence the effects of self-efficacy in students (Narayanan & Cheang, 2016). It has also been shown to predict academic resilience among first-year Malaysian students (Narayanan & Cheang, 2016), social work students (Wilks & Spivey, 2010), and most recently during the pandemic among undergraduates in China (Mai et al., 2021) and the United States (Lady, 2021).

Social support covers a broad system of family, friends, significant others, classmates, lecturers, and the community. It can be defined as a process of relationship formed among at least two individuals, with the perception that said individuals feel cherished and supported through their difficulties (Brief & Weiss, 2002). Perceived social support is a component of social support based on one's subjective view of feeling cherished, worthy, and having a social network that they can rely on for support in times of need (Mai et al., 2021). And in the context of social-distancing and lockdown restrictions during the pandemic, students' need for social support becomes more crucial.

A mixed-method study by Lady (2021) on the importance of social support for American undergraduate students' academic resilience found that participants reported fewer social interactions and a smaller social circle during the pandemic, leading to feelings of isolation. Permatasari and colleagues (2021) also found that perceived social support significantly influences academic resilience among Indonesian students. Thus, while the COVID-19 pandemic has caused restrictions to social interactions and lower quality

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relationships with other students and teachers, a perception of support, encouragement, and care coming from their social circle can nonetheless boost their academic resilience to better face the challenges of online learning.

THE CURRENT STUDY

As previously outlined , academic resilience can be predicted by online learning readiness (Ramadhana et al., 2021). However, the mechanism that drives this link has not been sufficiently researched to explain it. Therefore, We investigated the following model (Figure 1) to gain insight into how perception of social support and academic self-efficacy could affect the relationship between students' online learning experience during COVID-19 and their academic resilience.

Figure 1

Proposed Mediation Model for the Impact of Student Online Learning Experience During COVID-19 on Academic Resilience via Academic Self–efficacy and Perceived Social Support
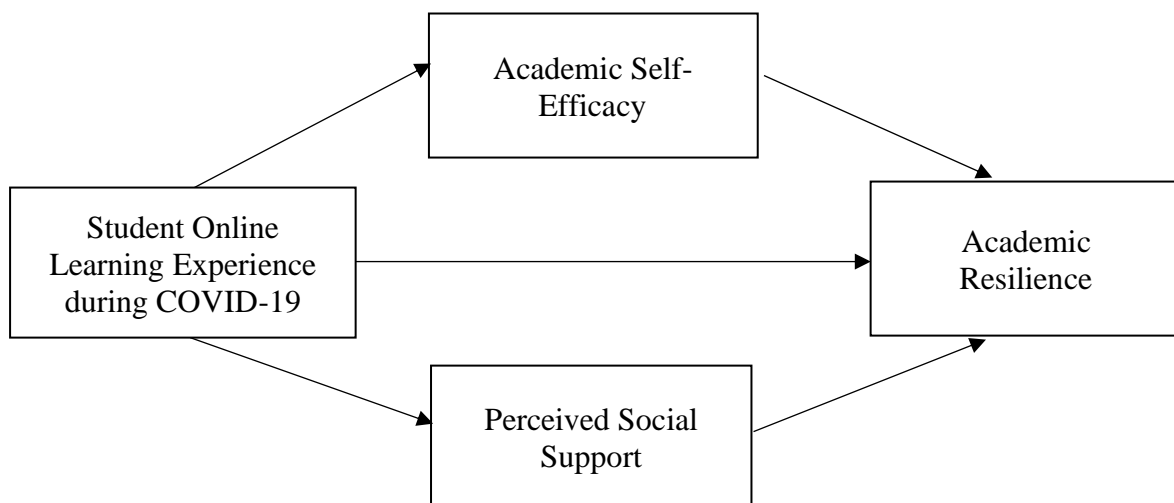
Notes. IV = Student Experience during COVID-19, MVs = Academic Self-Efficacy and Perceived Social Support, DV = Academic Resilience.

We hypothesized that positive online learning experience during COVID-19 would predict higher academic resilience, and that this relationship would be mediated by academic self-efficacy and perceived social support. We also hypothesized that students with positive experiences would also show higher levels of academic self-efficacy and perceive their social support system to be stronger.

METHODS

Participants & Design

An a priori power analysis using the G*power software prescribed an estimated sample size of 119 for our target alpha level of .05, power of .95, and moderate effect size of $f = .15$. After data screening, the final sample size consisted of 187 university students (128 females, 54 males, and five undisclosed) based in Singapore and enrolled in an online course (e.g., lecture/tutorials using Zoom or Blackboard Collaborate). Their ages ranged between 18 and 40 years ($M = 21.86$, $SD = 3.96$). The study utilized a non-experimental cross-sectional design that was correlational, using quantitative measures.

Materials and Procedure

Student Online Learning Experience During COVID-19

A nine-item questionnaire constructed by Dodd et al. (2021) was used to measure student's online learning experience. This questionnaire includes statements aboutdifficulties with social interaction online, preference between online and face to face lessons, confidence in online learning and interactions, and whether their home environment and computer skills supported online learning. For example, "I prefer online learning to face-to-face," was judged on a seven-point scale (1 = "strongly disagree" to 7 = "strongly agree"). No reliability estimate for the questionnaire was reported by Dodd (2021).

Academic Resilience

The 30-item Academic Resilience Scale (ARS-30; Cassidy, 2016; α = .90) was used to assess students' responses to vignettes describing hypothetical academic situationsParticipants rated the likelihood of certain behavioural, cognitive, and affective responses to academic problems on a five-point scale (1 = "likely" to 5 = "unlikely"), with items like, "I would keep trying," "I would give myself encouragement," and "I would probably get annoyed."

Academic Self-Efficacy

The eight-item Academic Self-Efficacy Scale (ASE; Chemers et al., 2001; α = .80) was used to measure various skills required for academic success in university, such as scheduling tasks, taking notes, and writing papers. Participants responded to items like, "I am a very good student" on a seven-point scale (1 = "very untrue" to 7 = "very true").

Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988; α = .88) was used to assess perceptions of social support. It consists of 12 items, categorized into three different support sources: family, friends, and significant others. Participants responded to items like, "My family really tries to help me" on a seven-point scale (1 = "very strongly disagree" to 7 = "very strongly agree").

Socio-Demographic Survey

The socio-demographic survey consisted of basic demographic information, living arrangements, and questions about how COVID-19 had impacted them in the past year (Dodd et al., 2021). Table 1 presents the detailed summary of this data.

Procedure

Ethical clearance for the study was granted by the Human Research Ethics Committee of James Cook University, Australia (Ref. H8451). The full survey took about 20 minutes to complete, and was posted on the Qualtrics platform. In addition, research posters carrying the survey link were circulated via the University's research sites and social media platforms like Facebook. Psychology undergraduate students of received course credits as incentive for their participation. The survey was administrated between June 2021 and November 2021.

RESULTS

Descriptive and Reliability Analysis

Descriptive results are presented in Table 1 below. Reliability analysis for Dodd's online learning experience questionnaire, the ARS-30, the ASE, and the MSPSS indicated internal consistencies of $\alpha = .74$, .91, .90, and .93, respectively.

Table 1

Demographic Characteristics of the Study Sample (n = 186[1])

Demographic Characteristics	*n* (%)
Age: *M* = 21.86, *SD* = 3.96	
Gender	
Male	54 (28.9)
Female	128 (68.4)
Prefer not to disclose	4 (2.1)
Current Location or Living Arrangements impacted by COVID-19?	
No	140(74.9)
Yes	
Returned to home country	15 (8.0)
Unable to travel to Singapore to begin to resume study	22 (11.8)
Moved out of student accommodation	0 (0)
Others, please specify	9 (4.8)
Mode of Study Enrolled in (i.e., before COVID-19)	
Face to Face	93 (49.7)
Online	51 (27.3)
Blended Learning (Combination of Face to Face and Online)	42 (22.5)
"COVID-19 has had a huge impact on my studies since it started in 2020"	
Agree[2]	138 (74.2)
Neither Agree nor Disagree	23 (12.3)
Disagree[3]	27 (13.4)
How their Study was Impacted:	
Units shifted online	123 (65.8)
Units of study canceled	22 (11.8)
Units of study postponed	23 (12.3)
Changes to assessment format	105 (56.1)
Changes to assessment timelines	64 (34.2)
Changes to frequency of contact with lecturers	101 (54.0)
Others	12 (6.4)
Impact of COVID-19 on Overall Learning Experience	
Negative	70 (37.4)
Neutral	88 (47.1)
Positive	28 (15.0)

Notes. [1]One participant did not complete any demographic questions. Hence, *n* = 186 and not 187.

[2]"Agree" includes strongly agree, agree, and slightly agree. [3]"Disagree" includes strongly disagree, disagree, slightly disagree.

Hypotheses Testing: Mediation Analysis

Mediation analysis was conducted to test if the relationship between student online learning experience during the COVID-19 Pandemic (IV) and academic resilience (DV) was mediated by academic self-efficacy (MV1) and/or perceived social support (MV2). We examined the models with MV1 and MV2 entered simultaneously. The mediation analyses were conducted using the PROCESS Macro Version 4.0 (Hayes, 2022) to test the bias-corrected 95% CIs around the indirect effect (IE) of the IV through the MV on the DV. The macro also examined a bootstrap re-sampling of $n = 5000$. The MV was judged to be significant if the biased corrected 95% CIs of the indirect effect from the bootstrap re-sampling excluded zero; otherwise it was considered nonsignificant (Williams & MacKinnon, 2008). Complete mediation occurred when the direct effect was non-significant, and partial mediation occurred when it was significant (Baron & Kenny, 1986). All calculations yielded unstandardized coefficients.

Results from Process Macro Model 4 revealed that student learning experience during COVID-19 (IV) predicted academic self-efficacy (MV1), $B = 20.45$, $t = 5.95$, $p < .001$, perceived social support (MV2), $B = 0.22$, $t = 2.42$, $p = .02$, and academic resilience (DV), $B = 0.14$, $t = 3.08$, $p = .002$. Academic resilience was also predicted by both academic self-efficacy, $B = 0.21$, $t = 5.56$, $p < .001$, and perceived social support, $B = 0.18$, $t = 5.62$, $p < .001$. Importantly, after the mediators entered the model, the impact of student learning experience on academic resilience was nonsignificant, $B = 0.05$, $t = 0.11$, $p = .91$. The IE of academic self-efficacy (MV1) was 0.10 and significantly excluding zero in the 95% CIs (0.05 to 0.15), and the IE of perceived social support (MV2) was 0.04 and significantly excluding zero in the 95% CIs (0.002 to 0.08).

Figure 2

Mediation Model for the Impact of Student Online Learning Experience during COVID-19 on Academic Resilience via Academic Self–efficacy and Perceived Social Support
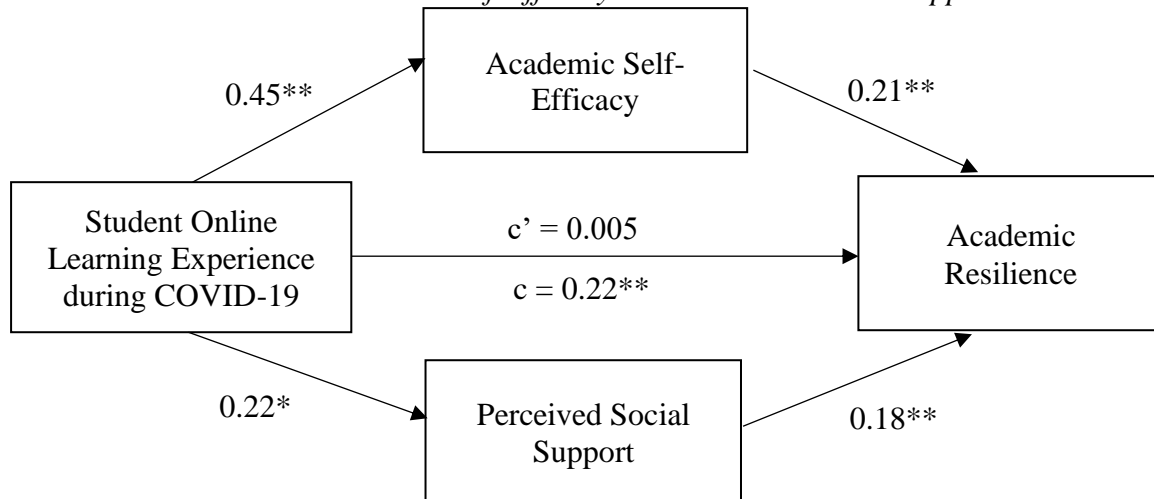
Note. *$p < .05$, **$p < .001$.

The model showed that academic self-efficacy and perceived social support completely mediated the impact of student online learning experience during COVID-19 on academic resilience. Interestingly, academic self-efficacy had a higher IE score than perceived social support, indicating it as the stronger mediator of the two.

DISCUSSION

Summary of Findings

The present study found that students' online learning experience was predictive of their academic resilience, while academic self-efficacy and perceived social support were complete mediators of this relationship. These findings confirm the proposed model, and also suggest that academic self-efficacy could be a stronger mediator of this link than perceived social support.

Implications & Suggestions

Student Online Learning Experience during COVID-19, Academic Self-efficacy, and

Perceived Social Support

Students who rated their online learning experience to be positive showed higher levels of academic self-efficacy—in other words, those who had a positive learning experience during the pandemic had a stronger belief in their ability to manage the disruptions it had caused and succeed academically. These findings align with those of Aguilera-Hermida (2020), which indicated that positive experiences with technology use significantly contributes to students' self-efficacy. Self-efficacious beliefs influence students' motivation, cognitive engagement, and effort, all of which contribute to their academic performance (Chemers et al., 2001; Alghamdi et al., 2020).

Student experience during the pandemic was also found to be positively predictive of perceived social support. This suggests that students who had positive online learning experiences had perceived their social support system of family, friends, and significant others to be more supportive during this period.

Our findings are also in line with previous research, indicating that lack of real-time interactions with peers and teachers may lead students to feel isolated due to lack of help-seekingand hampered feedback (Dodd et al., 2021; Lady, 2021; Means et al., 2020). Isolation from peers also causes challenges for students who view themselves as poor self-motivators since they rely on others for support in terms of motivation and regulation in their learning experience (Tichavsky et al., 2015).

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Model: Mediators of Student Online Learning Experience during COVID-19 and

Academic Resilience

The current study established a significant positive relationship between academic self-efficacy and academic resilience that is consistent with numerous previous studies (Cassidy, 2016; Hamill, 2003; Hayat et al., 2021; Narayanan & Cheang, 2016). This indicates that students who are more confident in their academic goals are likely to be more effective when faced with academic challenges. This tendency to hold faith in their strengths helps these students to persevere through hardship, and they are therefore more likely to respond adaptively (Cassidy, 2016). Similarly, this study also found a significant positive relationship between perceived social support and academic resilience. This suggests that students who perceive strong social support from family, friends and significant others are better able to cope with and persist through academic challenges (Lady, 2021; Narayanan & Cheang, 2016; Permatasari et al., 2021).

The most noteworthy finding of this study was that the relationship between student experience during COVID-19 and academic resilience was fully mediated by academic self-efficacy and perceived social support. This finding also conversely indicates that student experience did not directly predict academic resilience when controlling for the effects of academic self-efficacy and perceived social support. Simply stated, the impact of students' online learning experience during the pandemic on their academic resilience depended completely on their academic self-efficacy and perception of available social support. These findings signify that students who regard their online learning experience as positive tend to be more academically resilient because they have faith in their self-efficacy and trust in their social support circle.

Our findings echo with a similar study by Ramadhana and colleagues (2021). Theyfound a significant relationship between online learning readiness and academic resilience.Specifically, they noticed thatonline learning readiness includes two components of self-efficacy, internet self-efficacy and online communication self-efficacy. While these components of self-efficacy may not be identical to academic self-efficacy as operationalized in our study, the fundamentals of self-efficacy beliefs may arguably remain similar. While Ramadhana et al.'s (2021) examined the direct effects of the dimensions in online learning readiness on academic resilience, we examined a similar relationship of the online learning experience on academic relilance, with multiple mediators that included academidc self-efficacy. Thus, these collective results demonstrated the impact of online learning on academic resilience. More importantly, we found that academic self-efficacy and perceived social support emerged as mediators explaining the underlying link between online learning and academic resilience..

An important implication of the current study is that, given the pandemic's impact on students' learning experience, fostering academic resilience may be a redeeming factor in helping students persevere through challenges. Since academic resilience is predicted by academic online learning experience, universities must endeavor to provide students with a more engaging experience and efficient use of technology to enhance academic support and student interaction (Ang et al., 2021; Eri et al., 2021; Wut & Xu, 2021).

Based on our findings, we recommend that higher education institutions work to build their students' academic self-efficacy beliefs. Given the ambiguity of restrictions that may happen in the endemic future of COVID-19, it will be essential for university faculty and staff to find ways of bridging the gaps in course design for online delivery totransform it into a more effectively designed system which enhances academic resilience rather than impeding it.

Teacher support has been firmly established as adriving factor in students' academic self-efficacy and resilience (Ahmed et al., 2018; Cassidy, 2016; Kumalasari & Akmal, 2021). Hence, the academic support team and faculty should work together to foster students' academic self-efficacy by facilitating interactions between students, peers, and educators so that students are more equipped to succeed academically.

It may also be helpful for student academic support to promote self-regulation and self-efficacy skills by giving out tips and encouraging students to reflect on what works for their online learning process and what does not. This could also involve lecturers inviting struggling students to remain behind after online lessons. Such initiation by educators reminds students to monitor their learning progress and invites students who may be facing difficulties to reach out (Aguilera-Hermida, 2020). Further, lecturers can also implement instructional practices during online lessons such as (1) ensuring students can assess course materials, (2) connecting real-world examples to course content, and (3) having students express what they have learned and still needed to learn (Means et al., 2020). While these practices are recommended to boost students' satisfaction with online learning, they can also be regarded as ways to improve students' online learning experience, thus ultimately improving their academic resilience.

Students need to cultivate stronger self-efficacy beliefs and actively reach out for peer support to encourage conversation and convey support for one another. One method to achieve this may be to provide students with information on effective behavioural strategies to overcome academic challenges (Lady, 2021). Such support can alleviate the students' distress by showing examples of others that have had the same problems and the resilience strategies that were effective for them. Witnessing peers that students can identify with share information and tips on overcoming adversity can also boost self-efficacy, and thus academic resilience (Johnson et al., 2015).

Limitations and Future Directions

Firstly, our small sample size required us to restrict our interpretation of the results based on the global scales of measures used. We e could do more in-depth analyses between the variables and their subdomains with larger sample size. Secondly, the scale used to measure student online learning experience during COVID-19 (Dodd et al., 2021) needs further psychometric validation. While we elected to use it as a measure and verified its reliability to be fairly acceptable (α = .74), further factorial analysis is recommended with a larger sample to better establish its validity and reliability.

In addition, we tested the mediation model with the assumption that academic self-efficacy and perceived social support would simultaneously mediate the relationship between students' online learning experience during the COVID-19 pandemic on academic resilience. However, there could be an alternative model which research studies can explore. For example, when students feel positive about their online learning experiences, they might first rely on their social support status, enhancing their academic self-efficacy and thus academic resilience. In this alternative model, the mediators (i.e., academic self-efficacy and perceived social support) function sequentially in the relationship between students' online learning and academic resilience. As such, there could be more models to be tested to fully understand these relationships.

CONCLUSION

This study examined the impact of students' online learning experiences during the COVID-19 pandemic on their academic resilience, and the mediating effects of academic self-efficacy and perceived social support on this relationship. Based on the findings, we can say that academic self-efficacy and perceived social support are significant determinants of students' resilience via a complete mediation effect in the relationship between student

experience and academic resilience. This signifies the importance of both internal and external factors for predicting academic resilience, and the importance of fostering self-efficacy beliefs and encouraging social support for students. Promoting an effective online learning platform that offers social support and skills that boost students' academic self-efficacy will support their academic resilience in the long run. With higher levels of academic resilience, students can be better equipped to overcome adversities to achieve success in their academic goals.

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