An empirical study on college students' academic engagement in Sabah, Malaysia

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Abstract: **The purpose of this study was to examine the academic engagement of 46 college students in Sabah, Malaysia, by administering the Utrecht Work Engagement Scale online. Data that were collected were automatically transferred onto a spreadsheet and subsequently analyzed using SPSS 26.0. Kruskal-Wallis H test revealed no significant differences in these college students' academic engagement by way of ethnicity and age, while Mann-Whitney U test showed no significant differences in terms of gender. The group mean of the college students' engagement was 67.1, indicating that they had below-average levels of engagement. Additionally, percentages of strongly agree/agree responses for each item were collapsed to gain an overall impression of their engagement. A low 34.78 to 47.83 percent strongly agreed/agreed that they (1) could continue studying for very long periods at a time, (2) would feel bursting with energy when they were doing their work and (3) felt strong and vigorous when they were studying or going to class. Only 52.17 to 58.69 percent strongly agreed/agreed that they (1) felt like going to class when they got up in the morning, (2) got carried away when they were studying, (3) always persevered in their studies, even when things did not go well, (4) forgot everything else around them when they were studying, (5) felt happy when they were studying intensely and (6) found it difficult to detach themselves from studies. In light of the findings, some recommendations on how to improve college students' academic engagement were made.**

Keywords: **student engagement, motivation, college students, Malaysia.**

I.   INTRODUCTION

Student engagement is a positive, fulfilling and work-related state of mind that is characterized by vigour, dedication and absorption. Vigour is displayed through high energy levels and cognitive flexibility, willingness to work diligently and persistence despite setbacks, while dedication reflects a deep commitment to one's work marked by a sense of significance, pride, inspiration and enthusiasm. Lastly, absorption is characterized by deep focus whereby the individual is so engrossed that time seems to fly and that he or she finds it hard to detach from work (Schaufeli & Bakker, 2003; 2010). According to Snijders et al., (2022), student engagement is a multidimensional construct comprising cognitive, emotional and behavioural aspects that is crucial in achieving favourable learning outcomes through students' bonds with their tertiary institution. It includes various variables associated with students' devotion to educationally meaningful activities as well as their positive perceptions of the tertiary environment. Since student engagement primarily concerns students' involvement in their studies, it constitutes an inevitable aspect of their overall scholastic, intrapersonal and interpersonal experience. In brief, the more favourable their overall experience is, the more they will be engaged with their academic pursuits. Since engagement can positively influence students' academic, social or extracurricular performance, it is crucial for the development of generic attributes, interpersonal relationships between students and faculty as well as career readiness and adaptability.

As aforementioned, student engagement is often associated with participation in purposeful intellectual activities that yield better scholastic and interpersonal outcomes (Kuh, 2004; Kuh, Linnenbrink, & Pintrich, 2003; Zhao & Kuh, 2004). Umbach and Wawrzynski (2005) found that faculty-student contact tends to foster student engagement whereby active, collaborative learning tends to promote higher-order thinking and higher levels of student engagement. Reason, Terenzini and Domingo (2006) found that student engagement in academic activities or with faculty members tends to result in greater academic competence. Besides grades, critical thinking gains were also found to be related to greater student engagement (Carini, Kuh, & Klein, 2006). Overall, student engagement encompasses seven areas, including faculty-student contact, cooperation with peers, active learning, prompt feedback, on-task time, high expectations and respect for diverse learning (Chickering & Gamson, 1987). Student engagement in these areas was found to be positively associated with better grades regardless of students' college status as well as greater persistence into the second academic year (Kuh et al., 2008).

Amerstorfer and von Münster-Kistner (2021) postulated that student engagement comprises six components in relation to students' planning, managing and completing their tertiary studies. First, cognitive engagement is related to the involvement and participation in academic tasks, for example, paying attention, storing information and retrieving information. Second, metacognitive engagement involves students' cognitive actions, such as planning, coordinating academic tasks, evaluating learning outcomes and compensating for knowledge gaps. Third, affective engagement enables students to regulate emotions, such as dealing with boredom and curiosity, managing anxiety, appraising situations, maintaining motivation and showing empathy. Fourth, social engagement comprises interactions with peers and faculty, such as establishing a facilitative network, building supportive interpersonal relationships and being available for others. Fifth, task engagement enables students to interact with learning resources in constructive ways, such as practising academic skills and setting obtainable goals and potential rewards; it is often influenced by individual interest, motivation, resilience and endurance. Lastly, communicative engagement allows students to effectively communicate through writing, speaking and body language, such as receptive activities (e.g., attentive listening and observing body language) and productive activities (e.g., building and presenting arguments, and refuting others' arguments).

II.   REVIEW OF LITERATURE

A literature review was conducted in order to provide a theoretical framework for the current study. Kuh and Umbach (2004) who examined the impact of engagement on the character development among 49,692 college and university seniors found that student engagement in effective educational practices tends to enhance their academic experiences and character development. In other words, engagement in educationally purposeful activities and other substantive matters with faculty and peers enables students to receive frequent feedback on their performance, thus resulting in better grades, greater college satisfaction and higher persistence. Lastly, student engagement within a supportive and integrative environment also tends to promote greater character development.

Schmidt, Marks and Derrico (2004) examined the impact of service learning and engagement among 20 college students who mentored at-risk fourth graders. Student engagement was defined as students' voluntary service activities over the academic year, including the advantages of being involved in such services. Initially, mentors indicated that they wanted to make a difference in a child's life and supplement classroom learning. However, at the end of the academic year, they revealed that the service learning and engagement had taught them important lessons about children, themselves, community work and the value of mentoring. Carini, Kuh and Klein (2006) examined the impact of engagement on experimental and traditional measures of academic achievement among 1,058 college and university students. Findings showed student engagement was positively related to critical thinking and grades, with the low-ability students benefitting more from engagement than other categories. Moreover, first-year students and seniors were found to transform different forms of engagement into academic achievement, while certain institutions tended to convert student engagement into better critical thinking more effectively.

Schuetz (2008) used a mixed-methods study to develop, operationalize and test a new conceptual model based on the self-determination theory in relation to college student engagement. Themes derived from observations and semi-structured interviews with 30 students were used to support the new conceptual model. Findings showed that it represented a good fit with the student engagement data from over 1,000 students, implying that college engagement and related outcomes can be fostered through campus practices and policies that promote students' perceived sense of belonging, autonomy and competence. Strayhorn (2008) examined the relationship between engagement in educationally meaningful activities and

perceived personal and social learning outcomes among 8,000 college students. Findings showed that student engagement in good practices ranged from low to moderate levels in terms of faculty-student interactions, peer interactions and active learning. However, personal and social learning tended to be significantly and positively related to faculty-student interactions, peer interactions and active learning. Findings implied that students who frequently engage with faculty members, peers and active learning experience more perceived personal and social learning; therefore, administrators should implement campus programs and collaborative activities that encourage students to engage faculty and peers in debate, discussion and service-related activities.

Junco, Heiberger and Loken (2010) investigated the impact of Twitter on the engagement and grades among 125 college students, with the experimental group using Twitter for various types of academic and co-curricular discussions. Findings showed that the experimental group displayed a significantly greater increase in engagement than the control group, as well as better grades. Moreover, analyses of Twitter communications showed that students and faculty were actively engaged in the learning process in ways that transcended traditional classroom activities. Findings implied that Twitter can be used as an educational tool to promote student engagement and to mobilize faculty to become more participatory. Grier-Reed et al. (2012) investigated the psychometric attributes of the Student Engagement Instrument (SEI) with 122 college students. Findings showed that it significantly predicted career decision self-efficacy, whereby greater peer support predicted higher career decision self-efficacy. Moreover, higher student engagement was also significantly related to higher career decision self-efficacy. Findings implied that it is important to focus on positive relationships that can increase student engagement and improve their perceptions about career planning. Lastly, the SEI has the potential to narrow the gap between the operationalization and assessment of student engagement - at both who school and college levels.

You (2016) who examined the relationships among the psychological capital, learning empowerment and engagement among 490 college students found that psychological capital exerted a significant relationship with learning empowerment, while the relationship between psychological capital and engagement was fully mediated by learning empowerment. Findings implied the importance of boosting psychological capital to augment academic achievement and engagement, while learning empowerment should be fostered to enhance academic outcomes, creativity and student engagement. Gray and DiLoreto (2016) examined the effects of student engagement, learner satisfaction and perceived learning in relation to online learning among 216 university students, hypothesizing that student engagement would mediate the relationship of learner interaction and instructor presence on both perceived student learning and learner satisfaction. Findings revealed a significant relationship between learner interaction and student engagement; after student engagement was added to the model, the impact of learner interaction on student learning reached full mediation. Lastly, full mediation was also reached with student engagement mediating the effect of instructor presence on student learning, while student engagement partially mediated the impact of instructor presence and learner satisfaction. Xie, Heddy and Greene (2019) the impact of an experience-sampling method and mobile technology on real-time engagement and authentic learning among 133 preservice teachers. Findings showed that event-based sampling significantly improved sampling accuracy, whereby all three dimensions of engagement (behavioural, cognitive and affective engagement) and self-regulation in authentic settings could be examined and captured in real time. Lastly, the impact of self-regulation on the relationship between students' prediction of study time and reporting of authentic studying in real-time could also be examined using mobile technology.

Cents-Boonstra et al. (2021) observed how teachers applied the Self-Determination Theory in relation to teaching behaviours to improve student engagement among 43 teachers. Findings indicated significant relationships between motivating teaching behaviours and student engagement; the most distinct teaching behaviours were demonstrated through higher levels of relatedness support and guidance during class activities that encouraged students to exhibit high engagement. Conversely, students tended to be the least engaged when teachers displayed high levels of chaotic teaching behaviours. In contrast, teachers in highly engaging lessons tended to start with high levels of enthusiasm and energize students by offering more experimentation and support. Amerstorfer and von Münster-Kistner (2021) examined the influence of problem-based learning (PBL) approach on 39 English majors. Findings showed that academic engagement was significantly related to affective variables (e.g. motivation and enjoyment) and team membership (e.g. team spirit and fear of losing face). Moreover, PBL also tended to increase the effort and dedication of most participants, which was mainly due to the rotating roles, intense tasks and motivational effects of PBL. Additionally, the authentic and interesting topics of PBL tended to yield sustainable learning gains; participants tended to greatly appreciate the practical relevance of PBL in real life with its transparent and achievable learning goals. Findings implied that students can significantly benefit from PBL that reinforces self-regulated learning with varied information sources that make learning more interesting and interactive.

Yang et al. (2022) who investigated the engagement and burnout profiles in relation to perceived teaching styles among 412 primary school students found four student engagement categories, including moderately engaged, engaged, moderately burned out and burned out. Students belonging to the engagement categories tended to indicate higher autonomy support from teachers, while burned-out categories tended to rate their teachers as suppressive. Findings implied that autonomy-supportive teaching styles are crucial in understanding student engagement and school burnout; therefore, tailored teacher-focused intervention programs are important to augment teachers' awareness of autonomy-supportive teaching.

Lastly, Li and Xue (2023) meta-analyzed the factors influencing student engagement in higher education institutions in different contexts by integrating data from 93,188 participants and 148 effects across studies. Findings revealed 14 internal and external variables affecting intention, behaviour and process of learning participation. The main external influencing variables were environmental support, partnership, negative teacher and learning behaviours, all of which were negatively related to learning participation. Moreover, variables influencing student engagement comprised two categories. The promoting category includes students' positive emotion, positive teacher behaviour, the teacher-student relationship and partnership, students' positive learning behaviour and thinking ability, the support of learning resources, students' individual and personality characteristics and teaching variables, while the hindering category includes lack of environmental support, negative student and teacher behaviours.

Perceived gap, significance of the study and research questions

Research on student engagement extends beyond the traditional ways of assessing instructional effectiveness; student engagement can provide a more elaborate picture of the teaching-learning process since educators can use the construct to adapt their instructional practices in response to students' motivation, involvement and learning attitudes. In particular, student engagement is gaining popularity in current developmental psychology and educational research due to its potential to enhance academic performance, retention rates and positive attitudes. Although much has been published on the antecedents and outcomes of student engagement in Western countries, research on student engagement is still lacking in Sabah, Malaysia. Findings of this study would therefore increase awareness and understanding on the characteristics associated with student engagement that could be applied in order to provide targeted intervention in Malaysia. Additionally, this research study can advance understanding of the importance of engagement to different facets of the student experience, which may contribute to innovations in educational practices that can better prepare them for future employment. Given the current economic uncertainty and cost of higher education, retaining and empowering students to effectively engage in their education is crucial.

The current study would not only provide greater clarity and understanding on the application of student engagement, but may also enable educators to develop policies related to the construct. Exploring components of academic engagement can be fruitful in advancing institutional policy that focuses on equipping students with both professional and generic attributes. Findings of the current study would encourage educators to focus on students' dispositions or attitudes about classroom experiences in relation to their interest and how they interact with others and their learning motivation. In particular, they will yield greater insight into the affective factors of student engagement, including attitudes, personality, motivation, effort and self-confidence; these affective aspects enable educators to plan academic activities that encourage students to become active participants in their learning. Moreover, the findings provide a useful indicator of whether tertiary students perceive themselves as being on track and able to pursue their academic prospects. Insight into the link between student engagement and academic achievement is needed to inform practice. With the aforementioned gap and significance of research in mind, the purpose of this study was to examine the engagement among 46 college students from Sabah, Malaysia, with the following research questions to guide the study:

- Were there any significant ethnic, gender and age differences in the college students' engagement?

- What were the percentages of agreement on the questionnaire items with regard to college students' engagement and their implications?

III. METHODOLOGY

Sample

The sample consisted of 46 students recruited from a university college in Kota Kinabalu, Sabah, Malaysia. According to Parnell (2023), the rule of thumb for sample size specifies that a minimum of 30 data points for each group are needed for analyzing continuous data. The sample size of the current study might appear small, but 46 respondents should provide

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enough information to make a statistically sound conclusion about the college population in Kota Kinabalu, Sabah. The number of participants was adequate to generate meaningful insights into the research objectives with a certain degree of confidence in the findings. Moreover, the central limit theorem states that a sample size of $n \geq 30$ is sufficiently large to yield valid and reliable data for a basic descriptive study. Lastly, the sample came from diverse ethnic communities in Sabah (namely, Kadazandusun, Malay and Murut), and were fluent in both the Malay Language and English. They were enrolled in an early childhood education course of which the medium of instruction is English. The demographic information of the sample is shown in Table 1.

TABLE 1: Demographic characteristics of respondents (n = 46)

Characteristic	Category	Frequency	Percentage (%)
Age	18-20	35	75.09
	21-23	6	13.04
	24-26	5	10.87
Gender	Male	13	28.26
	Female	33	71.74
Ethnicity	Kadazandusun	24	52.17
	Malay	11	23.91
	Murut	7	15.22
	Other	4	8.70

Instrument

The college students' academic engagement was measured by the Utrecht Work Engagement Scale (Schaufeli, Salanova, González-Romá, & Bakker, 2002). This measure has three subscales, including vigour (e.g., I can continue studying for very long periods at a time), $\alpha S1 = .82$; dedication (e.g., My studies inspire me), $\alpha S1 = .75$; and absorption (e.g., It is difficult to detach myself from studies), $\alpha S1 = .82$ (Vaters, 2015). For the present study, the scores on the subscales were combined into a composite score reflecting overall engagement. Comprising 17 items, this measure has a Likert-type response scale ranging from 1 (never) to 5 (always). The full score is 85 (High = 77-85, Average = 68-76, Below average = Less than 68).

Data collection and analysis

A total of 46 college students were invited to complete the online questionnaire via WhatsApp; they were told that its completion was their indication of consent to voluntarily participate in the survey. All respondents were assured of their anonymity, while their identity would be kept strictly confidential. Data that were collected were automatically transferred onto a spreadsheet and subsequently analyzed using SPSS 26.0. First, Kruskal-Wallis H was conducted to determine if there were any significant differences in students' engagement in relation to ethnicity and age, while Mann-Whitney U was used to determine if there were any significant differences in terms of gender. Lastly, descriptive statistics were used to present the percentages of agreement on each item.

IV.   FINDINGS

Non-parametric results

Kruskal-Wallis H test revealed no significant differences in the college students' engagement by way of ethnicity and age, while Mann-Whitney U test showed no significant differences in terms of gender (see Table 2).

TABLE 2: Kruskal-Wallis H and Mann-Whitney U results

Variable	Non-parametric test	p-value
Age	Kruskal-Wallis H test	0.213
Gender	Mann-Whitney U test	0.752
Ethnicity	Kruskal-Wallis H test	0.789

Group mean and percentages of agreement

The group mean of college students' engagement was 67.1, indicating that they had below-average levels of engagement. Additionally, percentages of strongly agree/agree responses for each item were collapsed to gain an overall impression of the level of college students' engagement. A low 34.78 to 47.83 percent strongly agreed/agreed that they (1) could continue studying for very long periods at a time, (2) would feel bursting with energy when they were doing their work and (3) felt strong and vigorous when they were studying or going to class. Only 52.17 to 58.69 percent strongly agreed/agreed that they (1) felt like going to class when they got up in the morning, (2) got carried away when they were studying, (3) always persevered in their studies, even when things did not go well, (4) forgot everything else around them when they were studying, (5) felt happy when they were studying intensely and (6) found it difficult to detach themselves from studies (see Table 3).

TABLE 3: Percentages of agreement on students' engagement items

Items	1	2	3	4	5
It is difficult to detach myself from studies	0.00%	2.17%	39.13%	52.17%	6.52%
I feel bursting with energy when I'm doing my work	0.00%	0.00%	52.17%	43.48%	4.35%
To me, my studies are challenging	2.17%	2.17%	28.26%	47.83%	19.57%
I feel strong and vigorous when I'm studying or going to class	0.00%	2.17%	50.00%	41.30%	6.52%
I can continue studying for very long periods at a time	2.17%	13.04%	50.00%	30.43%	4.35%
My studies inspire me	0.00%	0.00%	30.43%	60.87%	8.70%
When I get up in the morning, I feel like going to class	0.00%	8.70%	39.13%	45.65%	6.52%
I feel happy when I am studying intensely	2.17%	2.17%	39.13%	39.13%	17.39%
I find my studies full of meaning and purpose	0.00%	0.00%	28.26%	45.65%	26.09%
When I am studying, I forget everything else around me	0.00%	8.70%	36.96%	43.48%	10.87%
I am proud of my studies	0.00%	2.17%	21.74%	52.17%	23.91%
Time flies when I am studying	0.00%	0.00%	30.43%	41.30%	28.26%
I am very resilient, mentally, as far as my studies are concerned	0.00%	0.00%	36.96%	54.35%	8.70%
I am immersed in my studies	0.00%	2.17%	34.78%	50.00%	13.04%
I am enthusiastic about my studies	0.00%	4.35%	32.61%	54.35%	8.70%
I get carried away when I am studying	0.00%	4.35%	39.13%	43.48%	13.04%
I always persevere in my studies, even when things do not go well	0.00%	0.00%	43.48%	39.13%	17.39%

Never =1, Rarely = 2, Sometimes = 3, Often = 4, Always = 5

V. DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

The college students in the current study demonstrated below-average levels of engagement. This finding was supported by previous research which indicated that many Malaysian students tend to lack personal autonomy (Thang, 2001; 2005; 2009; Thang & Alias, 2007) and show low level of class participation (Sayadin, 2007). According to Harvard Business Publishing (2022), lack of student engagement is one of the biggest problems in academia, irregardless of whether they are taught in person or online. One of the reasons for many students' lack of engagement is the manner that they are being taught. First, some students disengage because the instructors merely lecture with little energy or enthusiasm. Since it is already hard for them to focus throughout a long lecture, listening to someone talk monotonously discourages them from feeling invested in the subject. Second, content, delivery and length can hinder student engagement; those who find the content boring will be easily distracted. Some instructors just deliver the content directly from the slides with little explanation, thus making students disinterested. Most lectures are also lengthy, usually lasting two to three hours; so, it is not surprising that many students find it difficult to devote continuous attention to anything in an environment replete with distractions.

Third, inadequate real-world application, lecture heaviness and educators' lack of adaptability also adversely affect student engagement. Many students are increasingly deriving educational value from other resources, while questioning the gap between classroom content delivery and what is needed to thrive in the real world. They often disengage from extensive reading assignments and large cumulative tests, but prefer to focus on current affairs and project-based applications instead. Further, many instructors tend to be lecture-heavy by projecting their slides on a screen and lecturing without engaging their students, who in turn, will transfer little information into long-term memory. Lastly, instructors' lack of adaptability can also lead to student disengagement. For example, the pandemic has posed serious challenges for them to adapt to new delivery methods, learn new digital tools and work directly with students in a hybrid environment (Harvard Business Publishing, 2022).

Since college students have fundamental needs of autonomy, competence and connectivity with others, satisfying these needs increases their motivation to display a higher level of engagement. For example, since autonomy-supportive instruction can be regarded as a useful resource that has the potential to augment student engagement, instructors can increase student engagement via (a) nurturing students' inner motivational resources, (b) relying on noncontrolling informational language and (c) acknowledging students' perspectives and feelings. By considering students' viewpoints and nurturing their preferences and needs, instructors can set smart learning goals and provide students with engaging, enriching activities related to real life (Yang et al., 2022). Tertiary institutions can monitor instructors' teaching styles and hold seminars to inculcate effective teaching practices that can maximize student engagement.

Amerstorfer and von Münster-Kistner (2021) reiterated that the attributes and actions of instructors can affect student engagement. A strong dynamic often exists between student engagement and instructors' caring, communication style and feedback. First, confident and competent instructors often display care for their students, for instance, by encouraging interaction, providing support on demand, fostering engagement and learning gains and actively engaging in lessons themselves. They also create a positive, relaxed learning environment and show genuine interest in their students' overall functioning. Second, the instructor's communication style can help create a learning environment that motivates students to engage in academic activities because it reflects instructor behaviour and personality that often indicates respect and authenticity. Third, to engage students, instructors should provide prompt feedback by carefully considering their comments as well as the timing and manner in which they are relayed. While genuine and constructive feedback can be based on previous records or observations, it is important that instructors use clear criteria to clarify its framework and strengthen its effectiveness.

Additionally, Amerstorfer and von Münster-Kistner (2021) suggested that problem-based learning (PBL) can be used to increase student engagement as its setup is more relaxed than lecture-type teaching or other instructor-centred approaches commonly practised in tertiary education. PBL offers a proactive learning atmosphere characterized by student-centeredness and instructors' corresponding behaviour that helps develop positive interpersonal relationships in the classroom. Instructors are not perceived as being superior to students or the source of all knowledge; rather, they function as facilitators or guides who can create a feeling of closeness and foster positive relationship-building among students in class. Maintaining a high degree of professionality, such instructors strive to create a learning environment that perpetuates academic engagement and encourages deep learning.

Pellegrino and Sloan (2021) reiterated that student engagement and presence can be increased through connection, consistency and content that can motivate students to attend the class with eagerness to learn the subject matter. First, students need to feel connected to the lecturer as well as to the classroom to have a sense of belonging. Lecturers can help them feel engaged by recognizing them as a person and showing that they care about their success. To help students feel connected, lecturers need to demonstrate they are invested in their students' success, and in turn, be perceived as caring. Second, lecturers can propagate a consistent course experience from class to class with similar deadlines, course set up and itemization in the learning management system. Additionally, consistency is also critical for new students who require basic technology to successful engage in online learning, including updated devices and regular access to high-speed Internet. Therefore, instructors should orient new students to their course design in small, easy-to-assimilate learning opportunities. Third, they can ensure that students see their course value and feel enthused in their ability to successfully acquire the content. They need to provide course content that is level-appropriate; courses levelled too low will make students doubt about their value, while those levelled too high may fill them with insecurities about their ability to succeed; for example,

chunking content enables students to manage them in spurts of studying that often increases their chances of success. Lastly, it is recommended that they provide content that is relevant and applicable so that students can automatically transfer classroom knowledge into real-life applications.

Pellegrino and Sloan (2021) added that student engagement can be improved by fostering a sense of community and compassion. Since opportunity for community is a clear goal for classes and programs, tertiary institutions need to create community space and foster positive interpersonal relationships by encouraging students to collaborate with peers, while reducing the gap between students and their personal community as they continue their academic pursuits. Moreover, a sense of community can be fostered through video platform tools for synchronous sessions between students and faculty, posing questions to continuing students and meeting peers or connecting with peers who have similar interests and ambitions. Lastly, a community can be accompanied by compassion; for example, some students may delay their assignments to care for family members, their own health or meet unexpected work demands. These students often need empathy and understanding, with practical suggestions on how they might reschedule their deadlines or guidance on what to prioritize in their coursework.

As a final thought, it is suggested that future research on student engagement can include a larger sample size. Moreover, the construct can include factors not addressed by the current questionnaire. Since student engagement is a complex and fluid phenomenon that features a dynamic system of social and psychological constructs and synergistic processes, future studies can also explore it in-depth by including more social and psychological factors, such as social support, grit and academic buoyancy.

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