TRIPARTITE ANALYSIS OF EMPOWERING INDICATORS TO STUDENT ENGAGEMENT: INFORMING A CONCEPTUAL FRAMEWORK

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Abstract: Student engagement has been labelled as the latest buzzword in the field of higher education. As it gains wide recognition as critical to learning improvement and student development, the ways contributing to engagement appear to be necessary to fully understand the definitions and potential factors. Therefore, this article employed a method of tripartite analysis to ideas on portrait engagement and comprehensively synthesized impacting variables which can empower learning engagement. Findings demonstrated an operational definition of student

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engagement as well as a conceptual framework illustrated in three broad factors including socio-cultural integration, structural variables and psychological dimension. The operational definition and conceptual framework provided deep insights into student engagement and implies educators systematically devise courses and teaching practices.

Keywords: *learning improvement, student engagement, tripartite analysis*

INTRODUCTION

Shulman (2005) stated that "learning begins with student engagement (p.38)." Student engagement was labelled as the latest buzzword in the field of higher education (Graham Gibbs, 2014). Similarly, engagement is recognised as critical to personal development (Kuh, 2001); improved achievement , continuous learning, and persistence (Kuh, 2003; Trowler, 2010); an indicator of quality and success (James E. Groccia, 2018; Kuh 2009b). It is also positively correlated with desired learning, academic and social outcomes (Rasheed et al., 2020); assuring active participation in learning (Ahmed Faisal Siddiqi et al., 2020); playing a pivotal role in retention and school completion (Freeman & Simonsen, 2015; Krause & Coates, 2008); increase performance in level of efforts and attendance. Additionally, engagement can improve classroom instruction (Fletcher, 2015). Hence, the student who is engaged with their learning tends to be more likely to succeed.

Student engagement is dynamic, interactive, multidimensional (Fredricks et al., 2019), and multifaceted (Ben-Eliyahu et al., 2018), just like a blind man describing the giant elephant (Eccles, 2016). Studies into student engagement presume that it is likely to identify conditions and activities linked with effective learning, for the reasons why data provides direct measurement of students' involvement in critical processes during their learning journey.

Student engagement describes a learning task or a value to refer to the cognitive process, active participation, and emotional involvement of students in specific learning procedures (Pellas 2014). Kuh (2009) also stressed the roles of time and effort students devote to learning activities. Fredricks (2004; 2016; 2019) stated the construct of engagement which can provide a broader portrait of how students think, act and feel. Based on the abovementioned, student engagement identifies experiences of involvement, participation, connection, and feelings during the learning journey.

Student engagement is also divided into different aspects. The most well-known three dimensions consist of behavioural, emotional, and cognitive by Fredricks, Blumenfeld, and Paris (2004) and four types of engagement styles, including intense, collaborative, independent and passive (Coates, 2007). In 2010, The NSSE distinguished scales among academic scale, interactive scale, scales of active learning, enriching educational experiences and supportive learning environment.

Similarly, Karen and Webster (2019) devised student engagement into seven scales in transition, academic, peer, student-staff, intellectual, online and beyond-class with five main facets of academic engagement, cognitive engagement, social engagement with teachers and peers and affective engagement. Meanwhile, Bond and Bedenlier (2019) added more respect for the learning environment and technology, curriculum, and family.

Since engagement is dynamic and situational, reliance on survey measurement is a key limitation. This method just demonstrates a snapshot and drops out much of the complexity of this construct. Qualitative measures over time may be a more effective method (Saldaña, 2003). There is an essential need for qualitative study into an in-depth and holistic understanding of how student engagement is influenced (Fredricks et al., 2019), which is applied in the following section.

However, Ella R. Kahu and Karen Nelson (2017) claim that mechanisms enhancing student engagement have not been clearly

articulated. As much as engagement is the recognized pathway to success in learning, the ways contributing to engagement appear to be necessary to understand the definitions and potential factors fully. There is a comprehensive need to explore impacting variables which can empower learning engagement.

This article aims to comprehensively understand and portray engagement by structuring a multidimensional and multifaceted framework in a practical sense to encourage student engagement. Hence the chronological review of selected literature was first examined into emergent themes to identify the influential indicators. Then a conceptualized framework was structured to practice further.

METHOD

This article employed qualitative tripartite analysis in three steps for the critical study of selected literature in three phases, consisting of description, synthesis, and critique (See Figure 1).
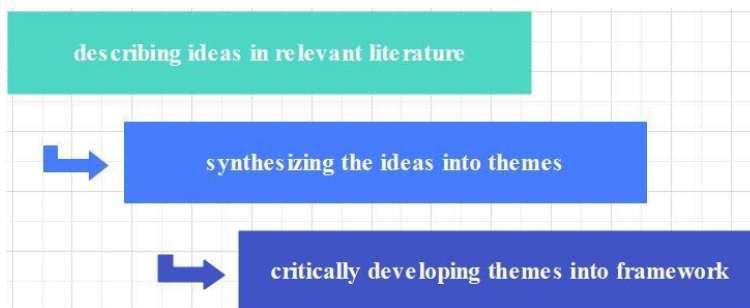

Figure 1. Data analysis steps

Stage 1: Initially, a descriptive summary of the fundamental ideas was identified in the literature. This part provided an overview of evolution, discussion and open questions.

Stage 2: In the second stage, the researchers synthesize the ideas into themes. The synthesis of these themes was operated through the integration of ideas and clarification of similarities and differences among these ideas, generating contradictions and controversies.

Stage 3: the third stage is the critical part. In this stage, new ideas and alternative views were developed into concepts based on the comparisons during conducting stages two and one.

FINDINGS

Having a comprehensive overview of the key principles found in the literature, the researchers identified, described, and summarized the fundamental ideas from previous studies on student engagement (see Table 1).

Table 1. Descriptions of ideas in selected literature

Descriptors	Contribution to engagement	Supporting literature
means to accomplish	The primary means to accomplish engagement: (1) an emphasis on collaborative efforts, (2) project-based assignments, and (3) non-academic focus	Kearsley, G. & Shneiderman, B. (1998). Engagement theory: A framework for technology-based teaching and learning. Educational technology, 38(5), 20-23.
approaches to engagement	behavioural, psychological, and sociocultural	Kahu, E. R. (2013). Framing student engagement in higher education. Studies in higher education, 38(5), 758-773.
interventions to enhance engagement	behaviour, emotional and cognitive	Fredricks, J. A., Reschly, A. L., & Christenson, S. L. (Eds.). (2019). Handbook of student engagement interventions: Working with disengaged students. Academic Press.
multipliers	The first tier includes interventions that aim to increase engagement in school and learning for all students. At the second tier are	Reschly, D. J., & Bergstrom, M. K. (2009). Response to intervention. In T. B. Gutkin, & C. R. Reynolds (Eds.), The Handbook of school psychology (4th ed, pp. 434-460). New York: Wiley.

	academic and behavioural interventions that are available to a smaller subset of students, between 10% and 20% of students who show signs of disengagement and academic problems and would benefit from additional targeted support.	
	at the third tier are the most intensive and individualized interventions for those students who demonstrate chronic and severe disengagement	Reschly, A., Pohl, A., Christenson, C., & Appleton, J. (2017). Engaging adolescents in secondary school. In B. Schultz, J. Harrison, & S. Evans (Eds.), School mental health services for adolescents. New York: Oxford University Press.
dimensions	behavioural, emotional, cognitive	Fredricks, J. A., Blumenfeld, P. C., & Paris, A. (2004). School engagement: Potential of the concept: State of the evidence. Review of Educational Research, 74, 59-119
typology	four-way typology of student engagement styles–intense, collaborative, independent and passive	Coates, H. (2007). A model of online and general campus-based student engagement. Assessment & Evaluation in Higher Education, 32(2), 121-141.
facets	(1) academic engagement, (2) cognitive engagement; (3) social engagement	Zhoc, K. C., Webster, B. J., King, R. B., Li, J. C., & Chung, T. S. (2019). Higher education student engagement scale (HESES):

	with peers, (4) social engagement with teachers, and (5) effective engagement	Development and psychometric evidence. Research in Higher Education, 60(2), 219-244.
	5 facets in the engagement: Learning environment and technology, Teacher, curriculum, peers, family	Bond, M., & Bedenlier, S. (2019). Facilitating student engagement through educational technology: towards a conceptual framework. Journal of Interactive Media in Education, 2019(1).
scales	five engagement scales: academic challenge, active learning, interactions, enriching educational experiences and supportive learning environment;	Ewell, P. T. (2010). The US national survey of student engagement (NSSE). In Public policy for academic quality (pp. 83-97). Springer, Dordrecht.
	seven engagement scales devised: (i) Transition Engagement Scale, (ii) Academic Engagement Scale, (iii) Peer Engagement Scale, (iv) Student-Staff Engagement Scale, (v) Intellectual Engagement Scale, (vi) Online Engagement Scale, and (vii) Beyond-Class Engagement Scale	Zhoc, K. C., Webster, B. J., King, R. B., Li, J. C., & Chung, T. S. (2019). Higher education student engagement scale (HESES): Development and psychometric evidence. Research in Higher Education, 60(2), 219-244.
factors enhancing engagement	students' need for competence, extrinsic rewards, intrinsic interest, social support, and sense of ownership.	Newmann, F. M. (1985). The radical perspective on social studies: A synthesis and critique. Theory & Research in Social Education, 13(1), 1-18.

self-efficacy, belonging, emotions, and wellbeing	Kahu, E. R., Picton, C., & Nelson, K. (2020). Pathways to engagement: A longitudinal study of the first-year student experience in the educational interface. Higher Education, 79(4), 657-673.
psychological factors (such as peer community, an engaging online teacher, and confidence) and structural factors (such as life-load and course design).	Farrell, O., & Brunton, J. (2020). A balancing act: a window into online student engagement experiences. International Journal of Educational Technology in Higher Education, 17(1), 1-19.
successful learner engagement depends on how well learners understand the goals, how soon they picture the distance between their status quo and those goals, and what they do to achieve the goals.	Caner, M. (2010). A blended learning model for teaching practice course. Turkish Online Journal of Distance Education, 11(3), 78-97. Chappuis, J. (2014). Thoughtful assessment with the learner in mind. Educational Leadership, 71(6), 20-26.
engagement depends on what teachers and students do together… neither can do it alone	Nystrand, M., & Gamoran, A. (1991). Instructional discourse, student engagement, and literature achievement. Research in the Teaching of English, 261-290.
self-efficacy	Kahu, E. R., & Nelson, K. (2018). Student engagement in the educational interface:

	understanding the mechanisms of student success. Higher education research & development, 37(1), 58-71.
Teacher enthusiasm;	Kunter, M., Frenzel, A., Nagy, G., Baumert, J., & Pekrun, R. (2011). Teacher enthusiasm: Dimensionality and context specificity. Contemporary Educational Psychology, 36(4), 289-301.
	Lazarides, R., Gaspard, H., & Dicke, A. L. (2019). Dynamics of classroom motivation: Teacher enthusiasm and the development of math interest and teacher support. Learning and Instruction, 60, 126-137.
Enthusiastic teaching	Keller, M. M., Hoy, A. W., Goetz, T., & Frenzel, A. C. (2016). Teacher enthusiasm: Reviewing and redefining a complex construct. Educational Psychology Review, 28(4), 743-769.
interest is essential for pleasurable satisfying learning	Dewey, J. (1913). Interest and effort in education. Forgotten Books.
interest predicts both intrinsic motivation for learning and positive affect	Bye, D., Pushkar, D., & Conway, M. (2007). Motivation, interest, and positive affect in traditional and nontraditional undergraduate students. Adult education quarterly, 57(2), 141-158.
four phases of learner interest: triggered then maintained situational	Hidi, S., & Renninger, K. A. (2006). The four-phase model of interest

	interest followed by emerging and then well-developed individual interest.	development. Educational psychologist, 41(2), 111-127.
	Interest involves alertness, attention and concentration and is a relation between a person and the task or topic	Ainley, M. (2006). Connecting with learning: Motivation, affect and cognition in interest processes. Educational Psychology Review, 18(4), 391-405.
	"the role of interest in encouraging persistence	Sansone, C., & Smith, J. L. (2000). Interest and self-regulation: The relation between having to and wanting to. In Intrinsic and extrinsic motivation (pp. 341-372). Academic Press.
	Enjoyment, a separate but related emotion, arises from a combination of interest and a feeling of competence in the task	Pekrun, R., & Linnenbrink-Garcia, L. (2012). Academic emotions and student engagement. In Handbook of research on student engagement (pp. 259-282). Springer, Boston, MA.
factors influencing classroom engagement	(1) student's origin, (2) school policies, (3) school environment, (4) community environment and (5) student's anticipated future plays an important role in developing and measuring their engagement to the classes.	Natriello, G. (1984). Problems in the evaluation of students and student disengagement from secondary schools. Journal of research and development in education, 17(4), 14-24.
	six factor construct with: "Class atmosphere", "Facilities provided in	Siddiqi, A. F., Shabbir, M. S., Abbas, M., Mahmood, A., & Salman, R. (2021). Developing and testing student engagement scale

the campus", "Course work", "Identical Social Stata within the classroom, "personality and competence of teacher", the "policies applied within the classroom	for higher educational students. Journal of Applied Research in Higher Education.
the role of class size	Blatchford, P., Bassett, P., & Brown, P. (2011). Examining the effect of class size on classroom engagement and teacher–pupil interaction: Differences in relation to pupil prior attainment and primary vs. secondary schools. Learning and instruction, 21(6), 715-730.
the role of technology	Diemer, M. A., Mistry, R. S., Wadsworth, M. E., López, I., & Reimers, F. (2013). Best practices in conceptualizing and measuring social class in psychological research. Analyses of Social Issues and Public Policy, 13, 77–113.
the role of poverty	Jensen, E. (2013). How poverty affects classroom engagement. Educational leadership, 70(8), 24-30.
the effect of class timing	Vitiello, V. E., Booren, L. M., Downer, J. T., & Williford, A. P. (2012). Variation in children's classroom engagement throughout a day in preschool: Relations to classroom and child factors. Early Childhood Research Quarterly, 27(2), 210-220.
the role of seating position	Shernoff, D. J., Sannella, A. J., Schorr, R. Y., Sanchez-Wall, L.,

		Ruzek, E. A., Sinha, S., & Bressler, D. M. (2017). Separate worlds: The influence of seating location on student engagement, classroom experience, and performance in the large university lecture hall. Journal of Environmental Psychology, 49, 55-64.
	the role of motivation	Oga-Baldwin, W. Q., & Nakata, Y. (2017). Engagement, gender, and motivation: A predictive model for Japanese young language learners. System, 65, 151-163.
	role of taking classes in a natural setting	Kuo, M., Browning, M. H., & Penner, M. L. (2018). Do lessons in nature boost subsequent classroom engagement? Refueling students in flight. Frontiers in Psychology, 8, 2253.
	impact of Students' Psychology	Castro, S., Granlund, M., & Almqvist, L. (2017). The relationship between classroom quality-related variables and engagement levels in Swedish preschool classrooms: a longitudinal study. European Early Childhood Education Research Journal, 25(1), 122-135.

The columns in Table 1 show multiple descriptions of views, scholars' contribution and their representative publications for the ideas and contributions to student engagement, concisely including the means to accomplish, approaches to engagement, interventions to enhance engagement, multi-tiers, dimensions, typology, facets, scales of engagement, factors influencing classroom engagement and enhancing engagement. In addition, the details are elaborated in rows which extend the further discussion of the previous to the subsequent. This preliminary finding provided readers and researchers with an

overview of relevant ideas and a basis for further analysis and synthesis, which were enacted in stage 2.

In the second stage, the synthesis of these themes was operated through the integration of ideas and clarification of similarities and differences among these ideas (See Table 2), generating contradictions and controversies.

Table 2. Synthesis of ideas into indicated themes

Themes	Ideas from literature
indicators to enhance engagement	means to accomplish
	approaches to engagement
	interventions to enhance engagement
	a multi-tiered approach to increase engagement
categories of engagement	dimensions, facets, typology, scales
variables influencing engagement	learning environment
	teachers and peers
	curriculum, course design
	psychological perspective (behaviour, emotion and cognitive)

Four main themes were extracted from a summary of ideas clarified in stage one, consisting of engagement indicators, categories and influencing variables. It confirmed the key findings. For instance, Greg Kearsley and Ben Shneiderman (1998) primarily emphasized means to accomplish engagement on collaborative efforts, project-based assignments, and non-academic focus. Kahu (2013) made a clearer analysis and critically identified three approaches to engagement in terms of behavioural emphasis, psychological process with behavioural, cognitive and affective dimensions and sociocultural perspective. Based on behavioural, cognitive and affective dimensions in 2004, Fredricks (2019) elaborated the detailed interventions to enhance engagement, for instance increasing classroom attendance, promoting participation in classroom activities, increasing connections with teachers and peers, goal setting and so forth. Reschly and

Bergstrom (2009; 2017) proposed a multitiered approach for enhancing engagement.

On the categories of student engagement, Fredricks, Blumenfeld, and Paris (2004) divided engagement into four styles, including intense, collaborative, independent and passive aspects. Each student is characterized with distinctive learning styles and habits, and hence levels of learning performance leads to various outcomes.

Similarly, Karen and Webster (2019) devised student engagement into seven scales in transition, academic, peer, student-staff, intellectual, online and beyond-class with five main facets of academic engagement, cognitive engagement, social engagement with teachers and peers and affective engagement. Meanwhile, Bond and Bedenlier (2019) added more respect to the learning environment and technology, curriculum, and family.

In addition to the abovementioned ideas and themes, factors influencing student engagement were categorized as the learning environment, teachers and peers, curriculum, course design, and psychological perspective (behaviour, emotion and cognitive). This echoes findings from studies of Kahu's (2013) integrative perspective of psychological and psychosocial influences, Fredricks' (2019) behavioural, emotional and cognitive perspectives, Siddiqi's (2021) six factors containing class atmosphere, campus facilities, coursework, similar social status and strategies within the classroom, personality and competence of the teacher.

However, the alternative ideas were scattered and needed critical reconsidering for an integrative structure.

Stage 3: In the critical part, new ideas and alternative views were developed into concepts based on the comparisons during conducting stages two and one (See Figure 3).
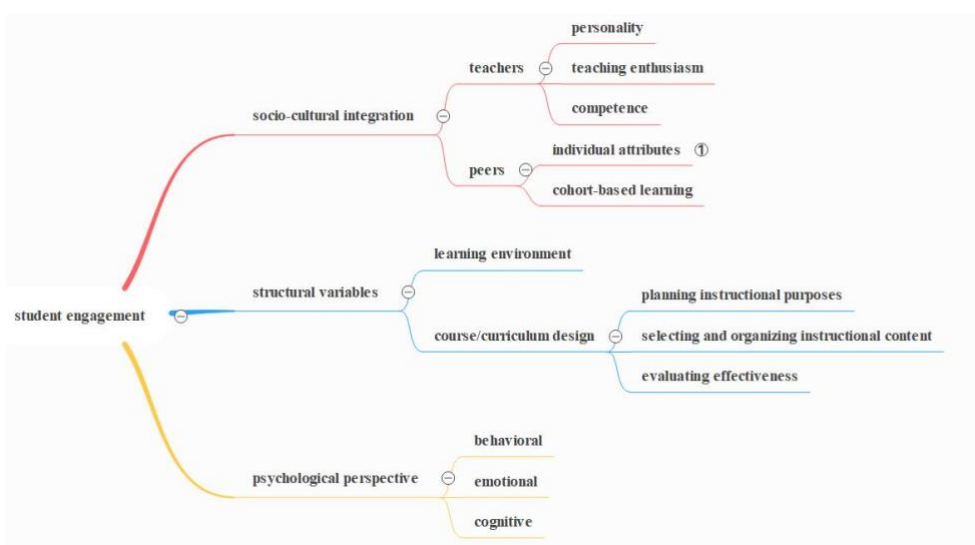
Figure 3. Conceptual map of developed ideas

Factors capable of influencing student engagement were mainly branched into sociocultural integration and structural and psychological variables. Moreover, personality, teaching enthusiasm and teacher competence were sub-factors in proceeding interaction with teachers and peers. By the influence of structural variables, the learning environment and the course design with basic principles at the second tier of this framework. Additionally, individual factors from a psychological perspective also are the constituents as a whole.

It is more possible to succeed for students who are fully integrated into social relationships in college (Tinto et al., 1993). Mauldin (2022) pointed out that social integration should be examined in respect of individual attributes and cohort-based learning. The influences of peer groups on student engagement rely on teacher involvement (Vollet et al., 2017) and thereby contributions to student engagement require an understanding of the joint effects of high teacher involvement and peer relationships.

DISCUSSION

Vygotsky (1978) pointed out learning improvement is the outcome of social and interpersonal interactions. Student engagement is shaped by a range of psychological, structural, and sociocultural factors. Engagement in learning can be increased by appropriate social support (Skinner et al.,1990), the prominent role of peers (Rezvan Hakimzadeh et al., 2016), and greater involvement in peer groups or peer-based activities (Page, 2008). Coates (2007) stated four styles of student engagement including intense style, independent style, collaborative style and passive style. Intense students evince high involvement in academic and social aspects of learning. Those students reporting independent forms of engagement show more involvement in academic learning and less social concerns whereas collaborative students belong to the opposite. Finally, those students who are passive rarely participate in academic and social events. In addition, Deci and Ryan (2000) suggested that students have fundamental needs of autonomy, relatedness and competence which could increase engagement if met. Consequently, both the typology model and self-determination theory emphasize the socially and academically oriented approach to learning.

The studies all present evidence about the important role of teachers and peers in student engagement in learning. Western countries have individualistic cultures with more attention to personal feelings, thoughts, and internal attributes than Asian countries which tend to have collectivistic cultures inherent less emphasis on the self (Rezvan Hakimzadeh et al., 2016). Chinese culture, like many other Eastern cultures, is traditionally collectivist （Hofstede & Minkov, 2010). In such a context, students tend to learn in pairs or groups. Therefore, social support from their teachers and peers in the Chinese context is necessary for learning engagement.

Student engagement is enhanced when the assessment tasks and activities are designed considering what intends to be learned in a course (Boud & Associates, 2010). Besides, Tyler (1949) stated four principles in guiding curriculum and instruction in which the learning

outcomes could be evaluated according to the purposes. Thereby the well-designed course including clarified objectives, learning content, learning activities and assessment is the potential to strengthen student engagement.

This paralleling earlier work from Farrell and Brunton (2020) on psychological factors, such as confidence and structural factors, such as course design and "enthusiastic teachers also appear to be happier and healthier" (Keller et al., 2016, p. 744), not only inspire and motivate their students but also improves learning achievements.

Most importantly, one of the first steps to further engagement is to make a clearer statement of the definition (Fredricks et al., 2019). According to previous studies and the new conception, we adapted Fredricks' definition of student engagement, defining it as a multitiered and multidimensional meta-construct involving an increasing level of investment in learning, positive reactions to communicative experience with teachers and peers, active participation in the learning environment, connection with coursework assignments and learning activities. It is consistent with the ideas of scholars but more comprehensively and intensively.

CONCLUSION

This article employed a tripartite model to analyze the ideas on portrait engagement and comprehensively synthesized impacting variables which can empower learning engagement. Finds demonstrated an operational definition of student engagement and a conceptual framework which was illustrated in three broad variables including psychosocial, structural and psychological. These variables could be further subcategorized into teachers, peers, learning environment, course design, behaviour, emotion and cognitive stance. This provided deep insights into student engagement and implies educators systematically devise teaching practices.

Yan, L., & Singh, C. K. (2023). Triparte analysis of empowering indicators to student engagement: Informing a conceptual framework. *JEELS*, 10(2), 285-305.

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