How teachers' conceptions of student engagement influenced their actual strategy implementation, and student online engagement

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Abstract: In this study, we explored the interplay between teachers' conceptions of student engagement, their strategy implementation, and student engagement in a videoconferencing-based fully online learning environment. The mixed-method multi-case study involved two postgraduate courses, with data collected via surveys and semi-structured interviews. Findings illustrated diverse conceptions of student engagement among instructors, influencing their teaching strategies and ultimately affecting student engagement. Instructors with a comprehensive, multidimensional understanding of engagement encompassing behavioral, emotional, and cognitive aspects were more likely to employ effective strategies, resulting in improved student engagement.

Keywords: Student engagement, teacher's conception, teacher's knowledge, engagement strategy, synchronous online learning

1. Introduction

The COVID-19 pandemic triggered a transition to online learning, utilizing videoconferencing for synchronous learning. However, research points to low student engagement in this setting (Maimaiti et al., 2021). Engagement, a key factor in learning outcomes and positive behaviors (Martin & Bolliger, 2018), is greatly influenced by the instructor (Farrell & Brunton, 2020). Yet, discrepancies often exist between teachers' conceptions and practices (Ndeke & Keraro, 2021). This study investigates how teachers' engagement conceptions influence their strategies and its subsequent effect on student online engagement. It seeks to answer: (1) How do instructors conceptualize student engagement? (2) How do their conceptions affect their implementation of engagement strategies? (3) How does their strategy implementation affect student engagement?

2. Method

This study, using a multi-case approach, quantitative and qualitative methods, explored two postgraduate courses at a Hong Kong university that had moved to online learning due to the pandemic. Participants, selected through convenience sampling, provided data via interviews and a survey. We conducted online interviews with 24 students (12 students from each course). Each interview took about 35 minutes. Pedler et al.'s (2020) engagement strategies framework (as shown in Figure 1) is used to guide question design. This framework offers instructors guidance for fostering behavioral, emotional, and cognitive engagement. Our research focused on these strategies within teaching practices, addressing gaps in previous studies that either ignored engagement's multidimensional aspects (e.g.,Nafukho & Chakraborty, 2014) or concentrated on student strategy use (e.g., Redmond et al., 2018). Along with the interview, we also used a self-reported engagement

questionnaire adapted from Skinner et al. (2008) and Rotgans and Schmidt (2011). This 14-item questionnaire, validated with Cronbach's alpha values over 0.8 (Lo, 2017), gathered data on behavioral, emotional, and cognitive engagement. We received 47 valid responses, with internal consistency of 0.89.

The interview data was analyzed using deductive content analysis with Pedler et al.'s framework as the coding matrix, and the survey data was descriptively analyzed and tested for significant differences between the two courses.

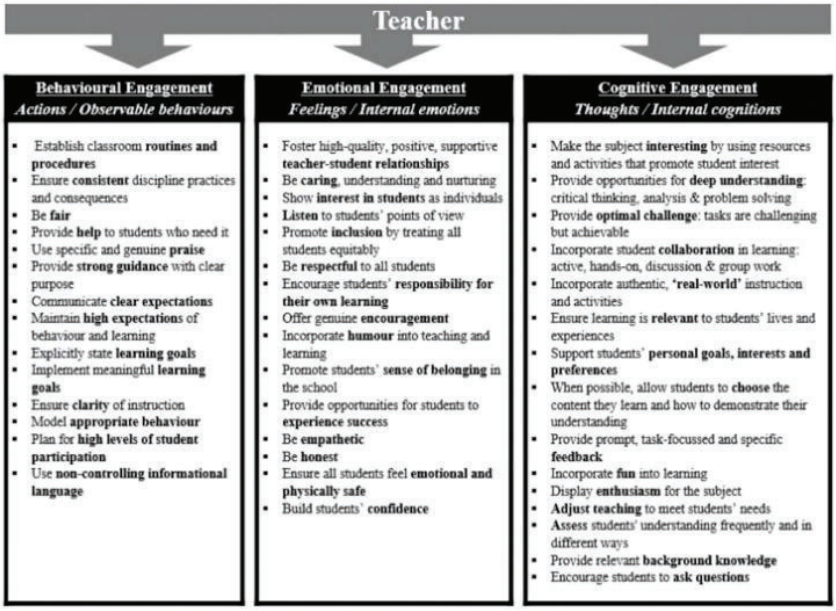

Figure 1. A framework of guidelines for teachers to promote student engagement (Pedler et al., 2020, p. 55)

3. Findings

Instructors from two courses held distinct conceptions of student engagement. Course One's instructor focused on learning experience design and alignment of activities with learning outcomes, viewing engagement as students mentally navigating through the learning process. Conversely, Course Two's instructors conceptualized engagement more specifically in terms of behavioral, emotional, and cognitive aspects, underlining the importance of active participation, enjoyment, and content understanding.

Course Two implemented all engagement strategies outlined by Pedler et al. (2020), while Course One's implementation was more selective. Course One's instructor used a rigid course outline, limiting opportunities for behavioral engagement. Students desired more interactive activities. Similarly, emotional engagement strategies were deficient in Course One due to the instructor's lack of emphasis on interaction, making students feel distant and disengaged. In contrast, Course Two fostered positive teacher-student relationships by creating interaction opportunities. Cognitive engagement strategies were partially implemented in Course One, with a focus on self-directed learning but limited measures to ensure student understanding and application of the content and promote student interest. Course Two, on the other hand, utilized all cognitive engagement strategies, employing diverse resources and activities to make lessons interesting, interactive, and practical.

Quantitative survey data of a T-test as showed in Table 1, indicated that students in Course Two exhibited significantly higher levels of behavioral, emotional, and cognitive engagement compared to students in Course One, which aligned with the interview findings.

Table 1. *T-test result of students' behavioural, emotional, and cognitive engagement*

Engagement dimension	Course	N	Mean	t-test	*p*-value
Behavioral engagement	Course One Course Two	25 22	3.592 4.264	-4.323	<.001
Emotional engagement	Course One Course Two	25 22	3.3920 4.0364	-4.211	<.001
Cognitive engagement	Course One Course Two	25 22	3.0400 3.6136	-3.832	<.001

4. Accessibility

This research investigated how instructors' engagement conception affect their strategy implementation and consequently, online student engagement. Instructors' unique conception, perhaps influenced by their research interests and other elements, significantly affected strategy effectiveness. The instructor of Course One focused on behavioral engagement strategies, leading to lower student involvement due to limited interaction and disregard for student interests. However, Course Two's instructors, who employed a broader engagement conception, utilized diverse strategies, enhancing student engagement. They fostered behavioral, emotional, and cognitive engagement via group activities, personalized communication, and practical application. The study highlights that instructors' engagement understanding informs their teaching strategies and affects student engagement online. It implies a comprehensive engagement conception can direct effective strategy execution. Future research could delve deeper into factors influencing instructors' conceptions of student engagement and involve larger participant sample size.

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