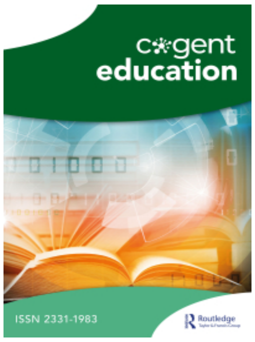

Cogent Education

ISSN: 2331-186X (Online) Journal homepage: www.tandfonline.com/journals/oaed20

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To cite this article: Merve Bozbiyik, Maria Harder & Olcay Sert (2025) Investigating student participation, engagement, and wellbeing in higher education: a systematic review of qualitative methods and digital tools, Cogent Education, 12:1, 2592381, DOI: 10.1080/2331186X.2025.2592381

To link to this article: https://doi.org/10.1080/2331186X.2025.2592381

Published online: 08 Dec 2025.

COGENT EDUCATION
2025, VOL. 12, NO. 1, 2592381
https://doi.org/10.1080/2331186X.2025.2592381

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Investigating student participation, engagement, and wellbeing in higher education: a systematic review of qualitative methods and digital tools

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ABSTRACT
Student participation and engagement are widely recognised as key contributors to academic success and wellbeing. However, few systematic reviews have explored student engagement and participation in relation to the related concepts of wellbeing (e.g. life satisfaction). Drawing from 20 years of literature across four major databases, this article addresses this gap by reviewing research on participation, engagement, and wellbeing in higher education, with a focus on qualitative methodologies and the use of digital tools. It demonstrates how these methods provide a detailed understanding of the factors influencing student experiences. The systematic review also focuses on the implementations of digital tools (i.e. video viewing, annotation, and observation) in analysing student participation and engagement in higher education. The article highlights the importance of innovative methodologies and using video annotation tools for exploring student participation and engagement in relation to wellbeing, and thus may contribute to future educational practices that create inclusive and engaging learning environments.

ARTICLE HISTORY
Received 17 August 2025
Revised 10 November 2025
Accepted 14 November 2025

KEYWORDS
Student engagement; student participation; student wellbeing; qualitative methods; digital tools

SUBJECTS
Social Sciences; Higher Education; Teaching & Learning

Introduction

In higher education environments, student participation and engagement play a significant role in achieving teaching and learning objectives and facilitating knowledge transfer to students' professional careers (Li et al., 2024). Although conceptual meanings of participation and engagement may overlap, they have distinct yet related perspectives. Participation refers to the projection of a speaker about others and the self (Goodwin, 1981, p. 5), which is accomplished verbally and physically through interaction (Evnitskaya & Berger, 2017). Engagement, on the other hand, represents active student involvement in learning tasks, interactions, and environments (Almqvist & Finnman, 2024; Hiver et al., 2021). Engagement also encompasses student dedication to goal-oriented, purpose-driven teaching and learning activities.

As a dynamic and multidimensional construct, engagement includes three primary dimensions: behavioural, cognitive, and emotional engagement. Behavioural engagement involves students' active efforts to participate in various activities, such as speaking (e.g. Philp & Duchesne, 2016), whereas cognitive engagement focuses on how learners are mentally involved in classroom events (e.g. Reeve, 2012). Emotional engagement pertains to students' positive and negative feelings about learning tasks (Mercer, 2019) and fosters motivation and willingness to engage (Guo et al., 2025). These three dimensions are often situated within a social context, including interaction with others, which can be considered a fourth dimension (i.e. social engagement) in some studies (e.g. Lambert et al., 2017).

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Effective management of student engagement and participation has been linked to positive outcomes such as academic achievement, wellbeing, and reduced course withdrawal rates (Lewis et al., 2011). Wellbeing, in this context, refers to feeling happy and healthy psychologically, cognitively, socially, and physically (OECD, 2021). Wellbeing influences our emotions, thoughts, and actions, leading to achieving good life conditions and fulfilling one's potential, particularly in education (Mittelmark & Bauer, 2022). Examining student wellbeing provides a deeper understanding of student engagement within and beyond higher education classrooms. Recent studies have increasingly explored the dimensions of engagement and their relationships with student wellbeing (e.g. life satisfaction) using primarily quantitative instruments such as scales and questionnaires (e.g. Novo et al., 2020). However, the relationship between student participation, engagement, and wellbeing has not been systematically documented from a qualitative perspective in educational research.

Participation and engagement are dynamic processes that evolve between participants and specific teaching and learning environments. While participation and engagement are often assessed through academic evaluations as indicators of performance, the complex, dynamic, and context-dependent nature of these concepts should be viewed as continuous processes rather than static points (Mercer, 2019). Therefore, there is a need to adopt discursive methodologies and theories to describe the dynamic and participant-oriented organisation of educational activities (e.g. Evnitskaya & Berger, 2017) and justify their analytic findings in line with theoretical frameworks of student engagement and participation (e.g. Kahu et al., 2020).

Student participation and engagement are collaboratively organised through various interactional practices (e.g. questioning, feedback) of the teachers and students, which helps them reach teaching and learning purposes in classrooms (e.g. Walsh, 2002). To capture the moment-by-moment organisation of student participation and engagement, authentic classroom videos can serve as valuable visual evidence (e.g. Jacknick, 2021; Sert, 2019). Utilising video observation may help educators and learners better understand student participation and engagement by analysing what works well and/or what needs to be changed in specific contexts (e.g. Sert & Waring, 2025; Waring & Creider, 2021). Video observation also allows researchers and educators to ensure that interpretations of classroom-based findings are valid and coherent (e.g. Tseng, 2021). Thus, in teacher education, video viewing has increasingly been used with digital tools (e.g. video annotation, tagging) to explore actual teaching performances and provide feedback to pre-and in-service teachers during post-observation conferences (Gynne et al., 2022; Sert et al., 2021). Moreover, the interactional data of both video-recorded classroom interactions and follow-up post-observation sessions have been analysed through discursive methodologies such as multimodal Conversation Analysis (e.g. Bozbıyık et al., 2021) and Discursive Timeline Analysis (Bozbıyık & Sert, 2025; Sert et al., 2025) to provide data-led implications through visual evidence. However, to what extent video annotation tools are used to explore student participation and engagement through classroom episodes and their links with student wellbeing has been underexamined.

Several recent systematic reviews have documented engagement-relevant phenomena in the literature, such as engagement in language learning (Hiver et al., 2021), student participation in school decision-making processes (Mager & Nowak, 2012), and the wellbeing of university students during the pandemic (Lemyre et al., 2023). In addition, recent empirical studies further highlight the psychological and contextual mechanisms that sustain student engagement. For example, Guo et al. (2025) demonstrate how social and emotional skills influence Chinese undergraduates' participation in high-impact educational practices through interpersonal interaction and school support, while Xia et al. (2025) show how autonomy support and self-efficacy sustain emotional engagement in longitudinal designs. These studies illustrate growing interest in linking engagement to wellbeing-related constructs. However, to our knowledge, no systematic reviews have investigated different types of qualitative theories and methods for exploring the dynamic organisation of participation and engagement, nor the use of digital tools for providing visual evidence to examine student participation and engagement from a student wellbeing perspective in higher education. Against this background, this systematic review aims to investigate (1) the types of qualitative theories and methods used to describe continuous processes of student participation and engagement and (2) how digital tools (e.g. video viewing) are utilised to explore these aspects in relation to student wellbeing in higher education. This study addresses the following research questions:

1. Which qualitative research theories and methods are implemented to investigate student participation and engagement in higher education?
2. In what ways are digital tools implemented to analyse student participation and engagement?

In this review, we define *qualitative research methods* as approaches that analyse non-numeric data to explore student participation, and engagement in line with wellbeing. This includes thematic analysis, interviews, and focus groups, as well as interaction-focused approaches such as discourse and conversation analysis. By including this methodological diversity, the review captures both students' experiences and interactional processes, highlighting opportunities for more fine-grained analyses. Regarding the digital tool, we refer to video viewing, annotation, and observation tools as part of video-based reflection to explore student participation and engagement in higher education.

Method

This systematic review was conducted to comprehensively analyse high-quality research studies aligned with the research questions. In this study, existing studies are mapped through two interconnected searches: (1) qualitative research theories and methods exploring student participation and engagement in higher education, and (2) video observation/annotation tools analysing student participation and engagement, with a specific focus on related concepts of wellbeing (e.g. life satisfaction). Accordingly, this systematic review adopts a configurative approach (Gough et al., 2017) to document previous literature and illuminate the research gap at the intersection of these two research questions, distinguishing it from an aggregative approach that would test a single theory. The systematic review followed the principal stages of configurative systematic reviews, including literature identification, selection, evaluation, and analysis.

The procedural framework first established comprehensive inclusion criteria for both research questions, encompassing publication year, study types, databases, research settings, and population parameters. Specifically, all studies were required to be published in peer-reviewed journals in Web of Science, Scopus, ERIC, and APA PsycINFO databases in the last 20 years (2004–2024). While Web of Science and Scopus provided broad academic coverage, ERIC and APA PsycINFO offered specialised insights into educational and wellbeing-related research domains relevant to the research questions. The following procedures of the systematic review will be introduced in line with the two research questions of this article.

Research question 1: qualitative research theories and methods for exploring student participation and engagement

The first part of this systematic review investigates the qualitative research theories and methods employed to explore student participation and engagement within higher education contexts, with an emphasis on student wellbeing.

Identification

During this initial stage, the research team meticulously identified the primary context (higher education), core conceptual domains (student engagement, student participation, wellbeing), and methodological focus (qualitative research theories and methods). This process involved developing comprehensive search terms and their potential synonyms (as detailed in Table 1). Subsequently, systematic search strings were constructed, enabling targeted retrieval of relevant studies across the designated databases (outlined in Table 2).

Selection of literature

As illustrated in Table 2, 422 studies were identified across the four databases and subsequently uploaded to Covidence for systematic screening, data extraction, and evaluation, facilitated by research librarians. Following initial compilation, 126 duplicate records were removed, eliminating redundant

Table 1. Search terms used regarding context, concepts, and method.

	Search terms instances
Context: Higher Education	Higher education, university, college
Concepts:	Student/learner engagement, participation, involvement
Student Engagement	
Student Participation	
Well-being	Wellbeing, quality of life, mental health
Qualitative research theories and methods	Qualitative, ethnology, field study, participant observation, phenomenology, thematic analysis, semi-structured interview, metaethnography, action research, focus group, mixed method, interaction, discourse, conversation analysis, corpus linguistics

Table 2. Search strings, databases, and number of identified studies.

	Search string instance (higher education, student engagement, student participation, wellbeing, qualitative research theories and methods)	Databases	Number of identified studies
1.	TS=('higher education' OR universit* OR college)	Web of Science	85
	AND	Scopus	133
	TS=('student engagement' OR 'learner participation' OR 'student involvement')	ERIC	160
		APA PsycINFO	44
	AND		
	TS=(qualitative* OR ethnol* 'field stud*' OR 'participant observ*' OR phenomenolog* OR 'thematic analy*' OR 'semi-structured interview*' OR 'meta-ethnog*' OR 'action research' OR 'focus group*' OR 'mixed method*' OR interaction* OR discourse* OR 'conversation analy*' OR 'corpus linguistics')		
	AND		
	TS=('wellbeing' OR 'quality of life' OR 'mental health')		
	Total Number		422

entries across the four databases. Before initiating the screening process, the research team comprehensively established and refined the inclusion and exclusion criteria (detailed in Table 3), concurrently developing a standardised coding framework for study exclusion within the Covidence system. It is noteworthy that the identical inclusion and exclusion criteria were applied consistently across both research questions to ensure methodological uniformity.

The interconnected stages of the literature selection are demonstrated in the PRISMA flow diagram (Figure 1 below). The screening procedure was rigorously conducted in two distinct phases by the three researchers, ensuring methodological thoroughness and inter-rater reliability. Initially, the first author meticulously screened the titles and abstracts of 296 potentially relevant studies. Following this preliminary assessment, 177 records were systematically excluded based on predefined identification and exclusion criteria. As depicted in Figure 1, the primary basis for exclusion (A2) was the studies' methodological orientation, specifically those employing quantitative or mixed-method approaches, including partially quantitative research designs. Several additional studies were simultaneously eliminated for three other reasons. During the second screening phase, the remaining 119 papers underwent a comprehensive full-text review to assess their alignment with the established exclusion criteria. This meticulous evaluation process culminated in the final selection of five records deemed suitable for subsequent data evaluation and analysis.

Data evaluation and analysis

The relevant studies (5 records included) were reviewed through the MMAT (Harder et al., 2024; Hong et al., 2018) by the researchers to check the quality of the study designs, and all records were deemed eligible for inclusion to respond to the second research question. To analyse these qualitative studies, thematic analysis was adopted to offer a robust description of the extracted studies as a flexible and useful research tool (Braun and Clarke, 2006, p. 5). The first author systematically conducted the data extraction process and applied thematic analysis to code the studies, identifying key patterns and themes based on their primary characteristics (as detailed in the Results section), directly aligning with the research question. The second and third authors independently reviewed and validated the initial coding and thematic interpretations, thereby increasing inter-rater reliability.

Table 3. Overview of the reasons for inclusion and exclusion.

The studies published between 2004 and 2024

Criteria	Inclusion	Exclusion	Reason code for exclusion
1. Type of study	Empirical Studies in the peer-reviewed journals	Non-empirical studies (e.g. theoretical papers, conference proceedings, systematic reviews)	A1
2. Methodology	Using qualitative methods and theories, and mixed methods of only qualitative methods	Quantitative studies, Mixed method studies including quantitative data collection methods (survey, questionnaire)	A2
3. Setting	Higher education environments	The setting is not corresponding to the requirements (primary or secondary schools) (*For only 2nd research question*): The settings used video as a data collection tool and/or teaching resource for learning.	A3
4. Population	University lecturers and undergraduate university/ college students	The population is not corresponding to the requirements (primary, secondary school students, and postgraduate students).	A4

Research question 2: digital tools for the analysis of student participation and engagement

The second part of the review reports the ways digital tools (i.e. video viewing/annotation/observation) have been used to analyse student participation and engagement within the context of student well-being. The systematic review methodology closely mirrors the procedural framework established for the first research question.

Identification

The same search terms have been used for the context (higher education) and two concepts (student participation and engagement) (please see Table 1). In addition, the search terms for digital video tools were specified with video viewing, video annotation, and video observation to ensure precise alignment with the research question (as illustrated in Table 4). Utilising the expertise of research librarians, the search strings were systematically executed across four academic databases: Web of Science, Scopus, ERIC, and APA PsycINFO. This comprehensive search strategy yielded an initial corpus of 735 records, which were subsequently uploaded to the Covidence system (detailed in Table 5).

Selection of literature

During the initial screening stage, 15 duplicate studies were systematically eliminated by research librarians. The literature selection procedure (illustrated in Figure 2) employed identical exclusion criteria and coding frameworks established in the first review (as delineated in Table 3 above). The A3 (setting) criterion was described with references to the specific digital tools. Studies were deliberately excluded if they merely utilised video as a data collection instrument or as pedagogical teaching material. Applying these precise exclusion criteria, the research team comprehensively reviewed the titles and abstracts of 720 records. Consequently, 691 studies were systematically eliminated, primarily due to insufficient or inappropriate references to digital tool utilisation. Subsequently, 29 texts underwent comprehensive full-text screening to assess their congruence with the research question. Following meticulous evaluation, 22 records were ultimately excluded based on methodological incompatibility, inappropriate research settings, and population misalignment.

Data evaluation, and analysis

Similar to the procedure of the first research question, the MMAT was utilised as the data quality assessment tool to consider the appropriateness and quality of the selected studies. During this critical evaluation phase, two records were excluded due to methodological limitations, specifically a pronounced deficiency in generating substantive results related to student participation, engagement, and wellbeing. Following independent and systematic data screening conducted by the research team, five studies were ultimately selected for further analysis utilising Thematic Analysis (Braun & Clarke, 2006). The comprehensive results of the review will be presented in the subsequent section.

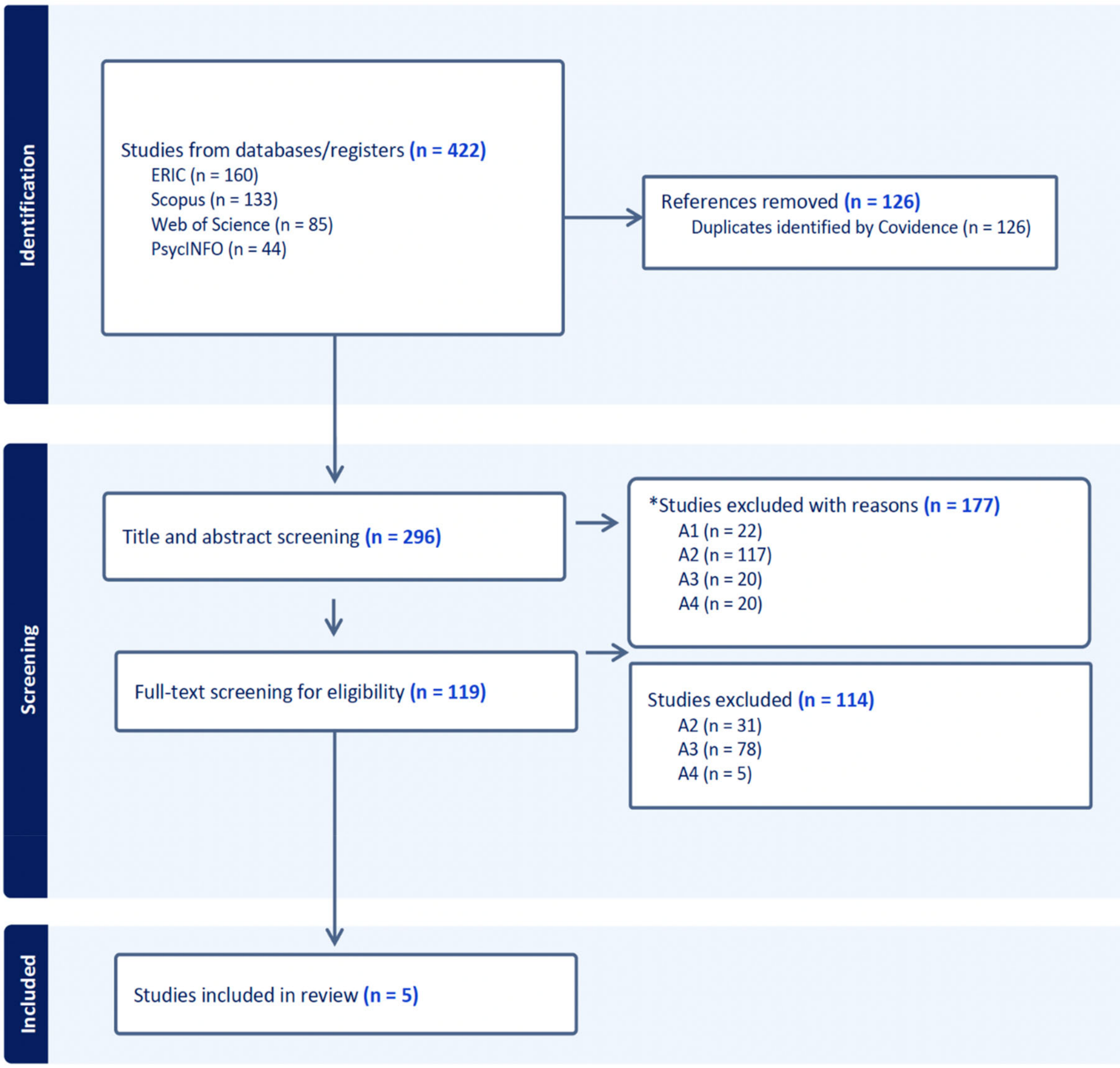

Figure 1. PRISMA flow diagram and selection process. PRISMA-style flowchart showing the study selection process. From 422 records across four databases, 126 duplicates were removed, leaving 296 studies screened by title and abstract. After exclusions, 119 full texts were reviewed, with 114 further exclusions. Five studies were included in the final review. A note indicates multiple exclusion tags per study.

Table 4. Search terms used regarding context, and concepts.

	Search terms instances
Context: Higher Education	higher education, university, college
Concepts:	Student/learner engagement, participation, involvement
Student Engagement	
Student Participation	
Digital Video Tools	video viewing, video annotation, video observation

Results

Research question 1: qualitative research theories and methods for exploring student participation and engagement

Characteristics of the studies

The first part of the systematic review examined five qualitative studies that employed various qualitative research methods to investigate student participation and engagement in higher education in relation to wellbeing (see Table 6). The studies published between 2017 and 2024, were conducted across different countries, including the United States (2 studies), the United Kingdom, Australia, and Namibia.

Table 5. Search strings, databases, and the number of identified studies.

	Search string instance (higher education, student engagement, student participation, digital video tools)	Database	Number of identified studies
1.	TS=('higher education' OR universit* OR college*)	Web of Science	11
	AND	Scopus	21
	TS=('student engagement' OR 'learner engagement' OR 'student participation' OR 'learner participation' OR 'student involvement' OR 'learner involvement')	ERIC	710
		APA PsycINFO	2
	AND		
	TS=('video view*' OR 'video annot*' OR 'video observ*')		
	Total number		735

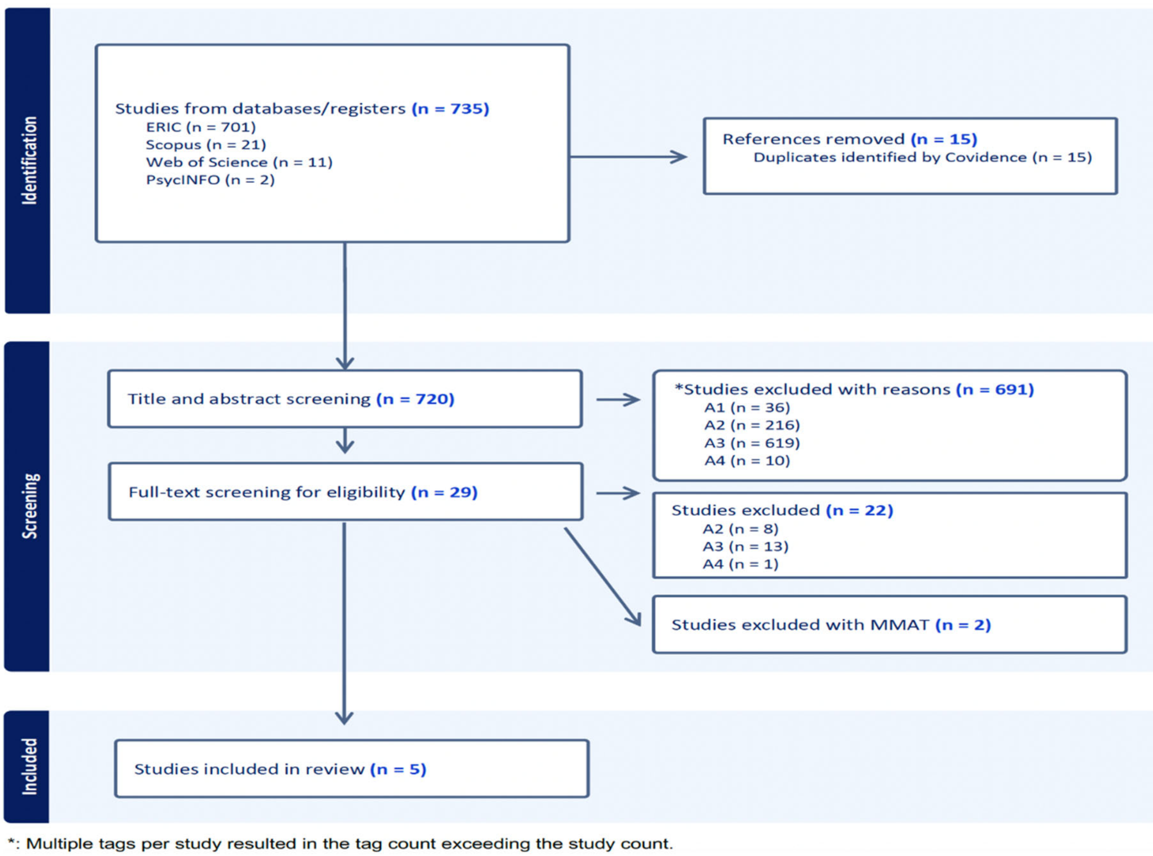

Figure 2. PRISMA flow diagram and selection process. PRISMA-style flowchart showing study selection. From 735 records across four databases, 15 duplicates were removed. After screening 720 titles and abstracts, 691 were excluded. Of 29 full-texts reviewed, 22 were excluded and 2 removed after MMAT assessment. Five studies were included in the final review. A note indicates that multiple exclusion tags per study caused the tag count to exceed the number of excluded studies.

The studies employed qualitative research methodologies, with sample sizes ranging from 10 to 53 participants, all focusing on undergraduate students in higher education settings.

Two of the studies were conducted in the United States: Arathi et al. (2023) investigated the relationship between depression and active learning experiences among 29 undergraduates, while Everett (2017) demonstrated that visual narratives positively influenced students' wellbeing alongside their academic and social engagement among 53 first-semester students. In the United Kingdom, Dickinson et al. (2021) found that students' involvement in extracurricular activities was influenced by various barriers such as time, location, money, and cultural expectations, with 38 participants from various undergraduate programs including criminology, law, nursing, and hospitality management. Kahu et al. (2020) also conducted a qualitative study in Australia with 19 first-year students, and identified complex interactions between institutional and student factors, while Tomas et al. (2024) revealed four themes, including conditions of engagement and student engagement dispositions among 10 nursing students at different

Table 6. Overview of the eligible studies.

Author, year, journal, country of origin	Purpose	Participants	Data collection	Data analysis	Main results
Arathi et al., 2023, CBE – Life Sciences Education, USA	to investigate how undergraduates' depression affects their experiences in active learning, and what aspects of active-learning practices exacerbate or alleviate students' depressive symptoms	29 undergraduates having depression and enrolled in at least one in-person active-learning college science course	A national exploratory interview study	Inductive coding of interview transcripts	Negative effect of students' depression on their cognitive domains, making learning and social interactions challenging 4 aspects of active-learning practices impacting students' depression: (1) opportunities to compare oneself with others, (2) socializing with others while learning, (3) frequent formative evaluation, and (4) engagement in learning.
Dickinson et al., 2021, Journal of Further and Higher Education, UK	to explore student engagement in extracurricular activities (ECAs) in higher education	38 students from different undergraduate courses (i.e. criminology, law, nursing, and hospitality management)	A series of six focus groups for ECA perceptions	A primary data analysis method /Thematic Analysis	A hierarchy of ECAs based on relevance to future employment, developing transferable skills, and cultivating social skills An enhanced awareness of the barriers to students' participation in ECAs depending on time, location, money, carer commitments, cultural expectations, and lack of confidence
Everett, 2017, Studies in Higher Education, USA	to explore how visual narratives foster academic and social engagement and personal well-being in a first-year seminar at the university	53 students enrolled in a mandatory first semester student success course	Visual narratives and the reflection papers	Qualitative data analysis	The analysis of visual narratives based on three themes: personal, social, and academic dimensions The analysis of reflection papers shows the benefits of using visual narratives regarding academic engagement, social engagement, personal development and wellbeing
Kahu et al., 2020, Higher Education, Australia	to understand the complexities of the student experience and engagement within the educational interface through the use of student narratives, and how student and university factors interact to influence engagement, as conceptualized in the student engagement framework	19 first-year students at an Australian university	Weekly semi-structured interviews	Thematic Analysis	3 themes of the complexities: (1) the complex ways that institution and student factors interact to influence the four pathways to engagement, (2) the connections and overlaps between the pathways, and (3) the positive and negative cycles of engagement that students experience wellbeing
Tomas et al., 2024, SAGE Open Nursing, Namibia	to explore nursing students' learning engagement experiences at a university campus in Namibia	10 nursing students in their second, third, or fourth year of study pursuing their studies at the satellite university in Namibia	Semi-structured interviews	Thematic Analysis through Colaizzi's seven-step method	4 themes of students' learning engagement experiences: (1) conditions and contexts of engagement, (2) student acts of engagement: positionality of teacher- and student-facilitated engagement, (3) consequences of engagement in a blended learning environment, and (4) student engagement dispositions: students' initiatives

stages of their education in Namibia. All studies employed qualitative methods, with specific approaches such as Colaizzi's seven-step method (Tomas et al., 2024) and inductive coding (Arathi et al., 2023). A detailed analysis of the theoretical frameworks and methodological approaches implemented in these studies will be presented in the following section.

The thematic analysis of the eligible studies

The review of the first research question identified four main themes in line with several qualitative research methods and theories (e.g. thematic analysis) employed to investigate student participation and engagement in higher education, referring to student wellbeing:

Diverse types of data collection. The studies utilised diverse types of data collection, including interviews (Araghi et al., 2023; Kahu et al., 2020; Tomas et al., 2024), focus groups (Dickinson et al., 2021), visual narratives and reflection papers (Everett, 2017). These data collection tools provide rich, detailed analysis crucial for understanding the complex dynamics of student participation, engagement, and wellbeing.

Qualitative data analysis techniques. In these studies, a variety of qualitative analysis techniques were employed to identify patterns and themes related to student participation and engagement with inductive coding (Araghi et al., 2023), thematic analysis (Dickinson et al., 2021; Kahu et al., 2020), Colaizzi's method (Tomas et al., 2024), and qualitative analysis of visual narratives and reflections (Everett, 2017). These techniques help identify patterns and themes related to student participation and engagement, focusing on student wellbeing and how different factors influence their experiences in higher education.

Theoretical frameworks guiding research. In the studies of Kahu et al. (2020) and Dickinson et al. (2021), various theoretical frameworks inform the research design and analysis: the student engagement framework (Kahu et al., 2020) and activity-based approaches (Dickinson et al., 2021). These frameworks help contextualise the results, provide a structured approach to understanding the qualitative elements of student participation and engagement, and offer insights into the factors influencing student wellbeing.

Influences on student wellbeing and engagement. The studies highlighted several influences on student wellbeing (physical and psychological) and engagement (e.g. behavioural, emotional), such as the impact of active learning on depression (Araghi et al., 2023), barriers to extracurricular activity (ECA) engagement (Dickinson et al., 2021), social and academic challenges (Everett, 2017), emotional and belonging pathways (Kahu et al., 2020), and learning engagement in blended environments (Tomas et al., 2024). These factors are crucial for understanding how to support student wellbeing and foster a positive educational experience in higher education.

In brief, the thematic analysis of the studies underlines the qualitative research theories and methods implemented to investigate student participation and engagement in higher education. The identified methods and frameworks not only provide an understanding of student perceptions and experiences but also highlight the importance of considering student wellbeing with the implications based on students, topics, and learning environments in educational research.

Research question 2: digital tools for the analysis of student participation and engagement

The characteristics of the studies

The second section of the systematic review examined five studies investigating how video-based tools were implemented to explore student participation and engagement in educational settings (see Table 7 below). These studies, conducted primarily in the United States (3), along with the UK and Hong Kong, focused on different video observation tools in educational contexts, with sample sizes ranging from 3 to 26 participants, primarily involving pre-service and in-service teachers.

The studies implement different video-based methodological approaches: video viewing for reflection and feedback (Gibbons & Farley, 2021; Wilkie & Liefeith, 2022), practice teaching videos with audio recordings (Johnson & Kuerten Dellagnelo, 2013), video-based interviews using classroom episodes (Lam & Chan, 2020), and video observation with group discussions (Osmanoglu et al., 2013). All studies utilised qualitative methods, including content analysis, microgenetic analysis, unit analysis, and inductive thematic analysis.

The results across these studies demonstrated the effectiveness of video tools in enhancing participation and engagement. Gibbons and Farley (2021) found that video reflection positively impacted pedagogical practices and learner engagement. Johnson and Kuerten Dellagnelo (2013) revealed that video-based pedagogical tools fostered greater student participation by reorganising teachers' thinking and activities. Lam and Chan (2020) showed how video-based interviews helped identify different levels of student engagement through verbal and nonverbal cues. Osmanoglu et al. (2013) identified engagement as a key dimension of student learning through video observation, while Wilkie and Liefeith (2022) demonstrated that video-enhanced feedback improved student engagement and interpretation in practical settings.

The thematic analysis of the eligible studies

In line with the second research question, this part of the review of the five selected articles reveals the diverse and multifaceted ways in which digital tools are implemented to analyse and enhance student participation and engagement, ultimately contributing to student wellbeing in higher education.

Enhancing reflective practices through digital tools

A key finding across the studies is the role of digital tools in enhancing reflective practices among educators. Video reflection and (video-) stimulated recall sessions are particularly effective in this regard, enabling teachers to reorganise their thinking, foster feedback appreciation, and enhance their instructional strategies (e.g. Gibbons & Farley, 2021; Johnson & Kuerten Dellagnelo, 2013; Wilkie & Liefeith, 2022).

Improving pedagogy and classroom management

Digital tools (i.e. video tagging, video annotation, and video viewing) also play a significant role in improving pedagogy and classroom management. The thematic analysis of the studies reveals that utilising video viewing enables teachers to review and analyse their classroom practices, which facilitates the identification of areas for improvement (Gibbons & Farley, 2021; Lam & Chan, 2020). These improvements in pedagogical practices are crucial for creating a conducive learning environment that supports student engagement and participation in higher education.

Analysing student engagement and participation

The video annotation tools help teachers observe and assess student interactions, leading to targeted strategies for increasing student engagement, and thus improving student performance and wellbeing (Gibbons & Farley, 2021; Osmanoglu et al., 2013). Additionally, technology-enhanced feedback can provide insights into student performance, allowing teachers to address specific areas where students may need additional support (Wilkie & Liefeith, 2022).

Capturing and analysing student thinking

The systematic review also shows that video-viewing tools are invaluable for capturing and analysing various forms of student thinking, including verbal and non-verbal evidence, helping them understand students' cognitive processes and tailor their support accordingly (Lam & Chan, 2020). In addition, these digital tools enable educators to observe problem-solving and communication skills, providing a deeper understanding of students' learning experiences (Osmanoglu et al., 2013).

Integrating technology in educational practices

Finally, the integration of technology in educational practices is a recurring theme across the studies. Video-based interviews (Gibbons & Farley, 2021; Johnson & Kuerten Dellagnelo, 2013; Lam & Chan, 2020; Osmanoglu et al., 2013) and technology-enhanced real-time feedback (Wilkie & Liefeith, 2022) are

Table 7. Overview of the eligible studies.

Author, year, journal, country of origin	Purpose	Participants	Data collection	Data analysis	Main results
Gibbons and Farley, 2021, Action in Teacher Education, USA	to explore how using video to reflect on practice contributes to PSTs' classroom practices, management strategies and student engagement.	15 pre-service teachers and 8 supervisors at 3 universities in the USA	Pre- and post-interviews with PSTs and university supervisors	Content Analysis	Use of video in reflective practice positively effect on preservice teachers' pedagogical practices, classroom management strategies, and learner engagement.
Johnson and Kuerten Dellagnelo, 2013, Language teaching research, USA	to investigate the functions of new pedagogical tools that help novice teachers facilitate student participation and engagement in their L2 instructions	A team of three novice teachers of English as a second language (ESL)	Videos of practice teach and actual teach, audio-recordings of video stimulated sessions, reflection papers	A microgenetic analysis	The new material sign forms developed by a teacher educator foster greater student participation and engagement in their practices by reorganising novice teachers' thinking and activities.
Lam and Chan, 2020, International Journal of Science Education, Hong Kong	to investigate how preservice teachers (PSTs) notice different forms of evidence of student thinking in simulated classroom situations during in-the-moment video-based interviews.	6 third-year PSTs enrolled in a 5-year undergraduate secondary science teacher preparation program	One-on-one semi-structured interviews by viewing short video clips of instruction in junior science classroom from the archive of professional development project	Idea Unit Analysis	Video-based interview approach is used to identify PSTs' in-the-moment noticing of verbal and nonverbal student thinking, different levels of student engagement.
Osmanoglu et al., 2013, Educational Sciences: Theory and Practice, USA	to investigate how the preservice and in-service teachers describe evidence of student learning when they view a seventh-grade mathematics classroom	A total of 26 pre-service and in-service mathematics teachers	Watching a video, including a case of mathematics instruction follow-up online group discussions	Content analysis	6 activities as evidence of mathematical learning: problem-solving, connections, communication, manipulative, engagement, and representation. Specifically, the engagement dimension was mainly seen as a source of student learning by pre-service teachers.
Wilkie and Liefeith, 2022, Teaching in Higher Education, UK	to explore the effectiveness of video-enhanced feedback, and student experiences of LSVF (live synchronized video feedback) during formative assessments	16 undergraduate sports coaching students in four group interviews	Group Interviews after video viewing	inductive thematic analysis	The video-enhanced formative assessment/feedback encourages to identify and improve student engagement, interpretation, and subsequent utilisation of feedback in practical settings.

highlighted as innovative methods for engaging with students and assessing their progress. The studies reveal that these tools not only enhance teaching effectiveness but also support student wellbeing by promoting active participation and immediate feedback. The papers also underline that technology-enhanced real-time feedback enables teachers to respond swiftly to student needs, thereby fostering a dynamic and responsive learning environment.

In conclusion, the second part of the systematic review demonstrates that video annotation tools are crucial for enhancing reflective practices, improving pedagogy and classroom management, analysing student engagement and participation, capturing student thinking, and integrating technology into educational practices. The studies in the systematic review also provide indirect implications about the potential contributions of using video annotation tools to explore the overall wellbeing of students in higher education by promoting active participation and engagement and providing valuable insights for educators to refine their teaching strategies.

Discussion

The results from two parts of the systematic review describe diverse qualitative research methods and digital tools (i.e. video annotation, observation, and tagging tools) in documenting and fostering student participation and engagement within higher education. Through a comprehensive examination of methodologies and tools used to analyse student involvement, this study provides valuable insights into understanding its link with student wellbeing.

The first research question of the review highlights the use of qualitative research methods in investigating student participation and engagement. Studies employing these methods reveal the complexity of student experiences and emphasise the importance of considering multiple dimensions of engagement – behavioural, cognitive, emotional, and social. Similar to the previous studies based on various factors such as interpersonal connections (emotional) and physical conditions (e.g. Guo et al., 2025; Xia et al., 2025), Kahu et al. (2020) and Dickinson et al. (2021) demonstrate how institutional and student factors interact to enhance student eagerness to engage, while Everett (2017) shows the benefits of using visual narratives to foster academic and social engagement. These results align with the literature on the multidimensional nature of engagement (Mercer, 2019; Philp & Duchesne, 2016; Reeve, 2012), confirming that understanding student participation requires a comprehensive approach that considers the interplay of various factors. This systematic search reveals that the included studies addressing participation and engagement adopt broader qualitative methodologies, such as thematic analysis of interviews and focus groups (e.g. Kahu et al., 2020). Thus, unlike the previous literature, which underlined the dynamic and multidimensional organisation of student engagement and participation (e.g. Evnitskaya & Berger, 2017; Jacknick, 2021; Mercer, 2019), the dominance of qualitative/thematic analysis of the interviews shows a reliance on broader qualitative methods, while discursive approaches remain underutilised.

The second research question of the systematic review focuses on the implementation of digital tools, such as video viewing, video annotation, and video observation, to analyse and identify student participation and engagement. The studies reviewed demonstrate the effectiveness of these tools in enhancing reflective practices among educators, improving pedagogical strategies, and providing valuable insights into student practices through video-based reflection. In line with the relevant literature (e.g. Waring & Creider, 2021), Gibbons and Farley (2021) and Wilkie and Liefeith (2022) illustrate how video reflection can positively impact teaching practices and build student engagement. Additionally, Lam and Chan (2020) and Osmanoglu et al. (2013) show how video-based tools can capture and analyse student thinking, helping educators to better understand and support student learning processes. These results are consistent with previous research that highlights the benefits of using video tools in educational settings (Gynne et al., 2022; Tseng, 2021). Furthermore, the included studies investigate engagement and teaching practices without explicitly examining wellbeing outcomes. Consequently, the links between participation, engagement, and wellbeing through video viewing in this review are indirect, pointing to a need for future research that integrates wellbeing measures more systematically into qualitative investigations of higher education.

Conclusion

This systematic review has revealed that the integration of qualitative methods and digital tools creates a comprehensive framework for understanding and enhancing student participation and engagement. This approach not only enhances pedagogical effectiveness through systematic reflection and feedback but also facilitates the creation of more inclusive and engaging classroom environments. Furthermore, it enables the development of data-driven strategies to support student wellbeing while implementing technology-enhanced methods that respond to diverse student needs.

The significance of this study lies in its holistic examination of methods and tools for analysing student participation and engagement while critically addressing the implicit reference to a wellbeing perspective in the included studies. By combining theoretical frameworks with practical applications, educators can develop more effective strategies to support student success. The results suggest that the integration of qualitative methods with digital tools can lead to more comprehensive and effective educational practices, ultimately contributing to improved student outcomes.

However, the study also identifies some limitations. First, the scope of the review excluded grey literature, even though it can decrease negative bias. Second, the focus on qualitative methods means that quantitative studies and mixed methods of quantitative and qualitative studies exploring similar themes were not included, potentially missing out on complementary insights from different research paradigms. Finally, in line with our predefined exclusion criteria, the number of studies included per research question remained relatively small ($n = 5$). In addition, the heterogeneity of the study settings, including those conducted in teacher education contexts, may have introduced variation in the scope and comparability of findings. These factors, taken together, raise the possibility of publication bias. However, the consistency of the identified themes across diverse contexts suggests that the findings capture broader patterns rather than isolated trends. Moreover, by applying transparent selection criteria and systematically mapping the evidence, this review offers a robust and meaningful synthesis that can serve as a foundation for future, larger-scale investigations.

In conclusion, this article provides valuable insights into the ways qualitative research methods and digital tools (e.g. video annotation) are employed to analyse and enhance student participation and engagement in higher education. For teachers, the findings highlight the potential of integrating digital tools into teaching practice to capture observable indicators of student engagement and to inform more responsive and effective pedagogical practices. For program leaders, the review underscores the importance of fostering institutional support for the systematic use of video-based reflection practices, which can enhance both student learning and teacher professional development. For researchers, this study highlights the need for further methodological innovation, such as employing video-stimulated recall and incorporating qualitative methodologies to investigate the links between participation, engagement, and wellbeing, which can provide innovative approaches to create more effective and supportive learning environments in higher education.

Author contribution statement

Merve Bozbıyık: Conceptualisation, methodology, investigation, visualisation, validation, methodology, formal analysis, writing – original draft, writing-review and editing. **Maria Harder:** Supervision, conceptualisation, validation, methodology, writing-review and editing. **Olcay Sert:** Supervision, conceptualisation, validation, methodology, writing-review and editing. All authors meet the authorship criteria and have read and approved the final version of the manuscript.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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Data availability statement

The data supporting this systematic review are available upon reasonable request from the corresponding author.

References

Almqvist, L., & Finnman, J. (2024). Engagement in activity settings of first and second language learners in pre-school–The role of qualified preschool teachers and classroom structure. *Early Education and Development*,36(3), 744–765. https://doi.org/10.1080/10409289.2024.2423388

Araghi, T., Busch, C. A., & Cooper, K. M. (2023). The aspects of active-learning science courses that exacerbate and alleviate depression in undergraduates. *CBE—Life Sciences Education*, *22*(2), 1–26. https://doi.org/10.1187/cbe.22-10-0199

Bozbıyık, M., & Sert, O. (2025). Increasing awareness of teacher corrective feedback practices through a data-led teacher education framework. In O. Sert & H. Z. Waring (Eds.), *Conversation analysis and language teacher education – Intervention studies* (pp. 121–142) Springer.

Bozbıyık, M., Sert, O., & Akpınar, K. D. (2021). VEO-integrated IMDAT in pre-service language teacher education: A focus on change in teacher questioning practices. In P. Seedhouse (Ed.), *Video enhanced observation for language teaching: Reflection and professional development* (pp. 83–97). Bloomsbury Publishing.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Dickinson, J., Griffiths, T. L., & Bredice, A. (2021). It's just another thing to think about encouraging students' engagement in extracurricular activities. *Journal of Further and Higher Education*, *45*(6), 744–757. https://doi.org/10.1080/0309877X.2020.1813263

Everett, M. C. (2017). Fostering first-year students' engagement and well-being through visual narratives. *Studies in Higher Education*, *42*(4), 623–635.

Evnitskaya, N., & Berger, E. (2017). Learners' multimodal displays of willingness to participate in classroom interaction in the L2 and CLIL contexts. *Classroom Discourse*, *8*(1), 71–94. https://doi.org/10.1080/19463014.2016.1272062

Gibbons, S., & Farley, A. N. (2021). Learning to think like a teacher: Effects of video reflection on preservice teachers' practice and pedagogy. *Action in Teacher Education*, *43*(3), 250–267. -https://doi.org/10.1080/01626620.2020.1812131

Goodwin, C. (1981). *Conversational organization: Interaction between speakers and hearers*. Academic Press.

Gough, D., Stewart, R., & Tripney, J. (2017). Using research findings. In D. Gough, S. Oliver, & J. Thomas (Eds.), *Introduction to systematic reviews* (2nd ed.) (pp. 279–296). Sage Publications Ltd.

Guo, Y., Xu, B., Lyu, B., & Chen, C. (2025). How social and emotional skills affect Chinese college student engagement in high-impact educational practices: A moderated mediation model. *Studies in Higher Education*, *50*(1), 27–46. https://doi.org/10.1080/03075079.2024.2328828

Gynne, A., Larsson, M., & Sert, O. (2022). Digitaliserad Reflektion Och lärares Agerandel Klassrumsinteraktion [Digitalized reflection and teachers' actions in classroom interaction]. In A. Nordin & M. Uljens, (Eds.), *Didaktikens språk omskolundervisningens mål, innehåll och form* (pp. 171–180). Gleerups.

Harder, M., Höglander, J., Engström, H. A., Holmström, I. K., & Blomberg, H. (2024). An. integrative review of communication in a professional-parental relationship provided in child health services: An authoritarian or guiding approach. *Patient Education and Counseling*, *118*, 108029. https://doi.org/10.1016/j.pec.2023.108029

Hiver, P., Al-Hoorie, A. H., Vitta, J. P., & Wu, J. (2021). Engagement in language learning: A systematic review of 20 years of research methods and definitions. *Language Teaching Research*, *28*(1), 201–230. https://doi.org/10.1177/13621688211001289

Hong, Q. N., Gonzalez-Reyes, A., & Pluye, P. (2018). Improving the usefulness of a tool for appraising the quality of qualitative, quantitative, and mixed methods studies, the Mixed Methods Appraisal Tool (MMAT). *Journal of Evaluation in Clinical Practice*, *24*(3), 459–467. https://doi.org/10.1111/jep.12884

Jacknick, C. M. (2021). *Multimodal participation and engagement:Social interaction in the classroom*. Edinburgh University Press.

Johnson, K. E., & Kuerten Dellagnelo, A. (2013). How 'sign meaning develops': Strategic mediation in learning to teach. *Language Teaching Research*, *17*(4), 409–432. https://doi.org/10.1177/1362168813494126

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. https://doi.org/10.1007/s10734-019-00429-w

Lam, D. S. H., & Chan, K. K. H. (2020). Characterising pre-service secondary science teachers noticing of different forms of evidence of student thinking. *International Journal of Science Education*, *42*(4), 576–597. https://doi.org/10.1080/09500693.2020.1717672

Lambert, C., Philp, J., & Nakamura, S. (2017). Learner-generated content and engagement in. second language task performance. *Language Teaching Research*, *21*(6), 665–680. https://doi.org/10.1177/1362168816683559

Lemyre, A., Palmer-Cooper, E., & Messina, J. P. (2023). Wellbeing among university students during the COVID-19 pandemic: A systematic review of longitudinal studies. *Publichealth*, *222*, 125–133.

Lewis, A. D., Huebner, E. S., Malone, P. S., & Valois, R. F. (2011). Life satisfaction and student engagement in adolescents. *Journal of Youth and Adolescence*, *40*(3), 249–262. https://doi.org/10.1007/s10964-010-9517-6

Li, C., Wei, L., & Cai, J. (2024). Life satisfaction and L2 engagement in adolescents. *ELT Journal*, *78*(2), 149–159. https://doi.org/10.1093/elt/ccad054

Mager, U., & Nowak, P. (2012). Effects of student participation in decision making at school. A systematic review and synthesis of empirical research. *Educational Researchreview*, *7*(1), 38–61. https://doi.org/10.1016/j.edurev.2011.11.001

Mercer, S. (2019). Language learner engagement: Setting the scene. In X. Gao (Ed.), *Second handbook of English language teaching.* (pp. 1–19). Springer.

Mittelmark, M. B., & Bauer, G. F. (2022). Salutogenesis as a theory, as an orientation and as the sense of coherence. In M. B. Mittelmark, G. F. Bauer, L. Vaandrager, J. M. Pelikan, S. Sagy, & M. Eriksson (Eds.), *The handbook of salutogenesis* (pp. 11–17). Springer Nature.

Novo, M., Gancedo, Y., Vázquez, M. J., Marcos, V., & Fariña, F. (2020). Relationship between class participation and well-being in university students and the effect of Covid-19. In *EDULEARN20 proceedings* (pp. 2783–2791). IATED.

OECD. (2021). Review of well-being policies and practices in Dubai's private school sector. *OECD iLibrary*. https://www.oecd-ilibrary.org/sites/98b157a6en/index.html?itemId=/content/.

Osmanoglu, A., Koc, Y., & Isiksal, M. (2013). Investigation of using online video case. Discussions in teacher education: Sources of evidence of mathematics learning. *Educational Sciences: Theory and Practice*, *13*(2), 1295–1303.

Philp, J., & Duchesne, S. (2016). Exploring engagement in tasks in the language classroom. *Annual Review of Applied Linguistics*, *36*, 50–72. https://doi.org/10.1017/S0267190515000094

Reeve, J. (2012). A self-determination theory perspective on student engagement. In S.L. Christenson, A.L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 149–172). Springer.

Sert, O. (2019). Classroom interaction and language teacher education. In S. Walsh & S. Mann (Eds.), *The Routledge handbook of English language teacher education* (pp. 216–238). Routledge.

Sert, O. (2021). Transforming CA findings into future L2 teaching practices: Challenges and prospects for teacher education. In S. Kunitz, N. Markee & O. Sert (Eds.), *Classroom based conversation analytic research: Theoretical and applied perspectives on pedagogy* (pp. 259–279). Springer.

Sert, O., Gynne, A., & Larsson, M. (2025). Developing student-teachers' interactional. competence through video-enhanced reflection: A discursive timeline analysis of negative evaluation in classroom interaction. *Classroom Discourse*, *16*(2), 142–171. https://doi.org/10.1080/19463014.2024.2337184

Sert, O., & Waring, H. Z. (Eds.). (2025). *Conversation analysis and language teacher education: Intervention studies* (Vol. 1). Springer Nature.

Tomas, N., Munangatire, T., & Haita, S. L. (2024). Nursing Students' Learning Engagement Experiences During the COVID-19 Pandemic in Namibia: Implications for Nursing Education. *SAGE Open Nursing*, *10*, 23779608241228494 https://doi.org/10.1177/23779608241228494

Tseng, S. S. (2021). The influence of teacher annotations on student learning engagement and video watching behaviors. *International Journal of Educational Technology in Higher Education*, *18*(1), 7.

Xia, Q., Xuan, S., Zhang, T., & Zong, B. (2025). How autonomy support sustains emotional engagement in college physical education: A longitudinal study. *Behavioral Sciences*, *15*(6), 822. https://doi.org/10.3390/bs15060822

Walsh, S. (2002). Construction or obstruction: Teacher talk and learner involvement in the EFL classroom. *Language Teaching Research*, *6*(1), 3–23. https://doi.org/10.1191/1362168802lr095oa

Waring, H. Z., & Creider, S. C. (2021). *Micro-reflection on classroom communication: A FABFramework*. Equinox Publishing Limited.

Wilkie, B., & Liefeith, A. (2022). Student experiences of live synchronised video feedback in formative assessment. *Teaching in Higher Education*, *27*(3), 403–416. https://doi.org/10.1080/13562517.2020.1725879