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How has the conceptualisation of student agency in higher education evolved? Mapping the literature from 2000-2022

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ABSTRACT

The objective of this article is to analyse the development and content of research in the global literature on student agency in higher education (SAHE) based on a bibliometric review of 224 articles published in the Scopus database during the period 2000–2022. VOSviewer, Excel, and Tableau software were used to analyse the texts. The review documented the growth trajectory and geographic distribution of the literature and identified the intellectual structure of SAHE. The findings show that the SAHE knowledge base has grown dramatically since 2017, particularly in the United States, Australia, and the United Kingdom. Five schools of thought emerged from the literature as the main pillars of agency, or individuals' capacities to take actions to improve their lives (1): the socio-cultural approach of agency (2); the social cognitive framework of agency (3); feedback, assessment, and agency (4); students' motivation and engagement; and (5) learning analytics, online education, and agency. The results show that student agency is framed within a constructivist and sociocultural learning perspective. Findings also demonstrate that agency has significant effects on personalising and increasing the dynamism and potential of academic experiences if students take an active role in managing their own learning.

Introduction

Human agency and its impact on human behaviour have long been studied in Socio-Cultural Theory (Archer 2003; Foucault 1975; Giddens 1984). In education, agency refers to students' holistic judgement of how they can affect and direct their learning in instructive settings, work effectively, and utilise the assets that are accessible within the learning environment (Saarela et al. 2021). Agency is considered an essential 21st-century learning skill for students, a concept that represents a goal and also a process to guide and help learners navigate the unknown (OECD 2019).

In higher education, agency is seen as a core component of professionalism (Paloniemi and Collin 2012; Tynjälä 2013) that comprises employability skills (Griffiths et al. 2018), collaboration skills (Bell 2010), digital competences (Ilomäki et al. 2016), and capacity for lifelong learning (Biesta and Tedder 2007). There is also empirical evidence that student agency has a significant impact on students' academic performance, cognitive development, and perceived learning experience (Pym and Ka, 2013; Lindgren and McDaniel 2012; Reeve and C. M. Tseng 2011).

Despite the importance of agency in education, discussions have been focused primarily on K-12 schooling. Less attention has been given to examining the nature of student agency in higher-

education institutions, especially through conceptual analysis. Only 3 studies on student agency in higher education (SAHE) emerged from our review of the literature. The first stressed that a lack of attention to the ways that students respond and use feedback leads to the notion of 'invisibility of engagement' (Price, Handley, and Millar 2011). The second study addressed the lack of information on the factors connecting technology-enhanced learning (TEL) with the development of student agency at the university level (Marín, Benito, and Darder 2020). The third study examined the relationship between student agency and student learning, with a focus on whether the reviewed research used a clear notion of student agency (Stenalt and Lassesen 2022). A common conclusion of all three reviews is that there has been a lack of consistency in the conceptualisation of student agency. Each piece of research addressed very different topics, and none examined the intellectual lineage that served as a foundation for studying agency; the present article aims to fill this gap. To the best of our knowledge, no bibliometric review studies have included a broad review of SAHE research.

Accordingly, the purpose of this article is to analyse the development and content of research in the global literature on SAHE based on a bibliometric review of 224 articles published in the Scopus database during the period 2000–2022. It answers the following research questions:

- What were the growth trajectory and geographic distribution of SAHE in the literature published between 2000 and 2022?
- What was the intellectual structure of the SAHE knowledge base?

The methodology of bibliometric analysis has been widely used in the physical sciences, medicine, and social sciences, although it is relatively new in education (Hallinger and Kovačević 2019). In higher education, this methodology is increasingly being used as a means of supplementing the subjective evaluation of bibliographic literature reviews.

Conceptualisations of agency

Agency has long been discussed in the literature, although its definition has depended on the epistemological and ontological bases of the discipline in which it has been analysed. In the social sciences, agency refers to the capacity of individuals to engage in intentional, self-defined, meaningful, and autonomous actions in circumstances constrained by power relations and structural and contextual factors (Archer 2003; Foucault 1975; Giddens 1984). In social-cognitive psychology, agency, understood as 'the power to originate action' (Bandura 2001, 3), acts as a mediating factor linking intentionality and individuals' self-processes, such as self-reflection and self-efficacy (Bandura 2006), motivational beliefs, such as utility value (Ryan and Deci 2000), and efficacy and competence beliefs (Schunk and Zimmerman 2012). In Social Cognitive Theory (SCT), human functioning is explained through processes of triadic reciprocal causality involving internal, behavioural, and environmental factors, all operating as determinants that interact and affect each other in bidirectional ways (Bandura 2001, 2006). In educational sciences, the concept of student agency is integrated into constructivist and sociocultural conceptions of learning (Martin 2004). Under this approach, learners not only play an active role in their construction of knowledge structures and the manifestations of agency, e.g. through the ability and capability to set goals and to make and act on choices during learning (Martin 2004; Zimmerman and Pons 1986), but also participate in social practices and get involved in the social construction of knowledge (Jääskelä, V. Heilala, and T. Kärkkäinen et al. 2021).

In the last decade, the explicit discussion of agency has emerged especially within the contexts of workplace and lifelong learning (Billett, Fenwick, and Somerville et al. 2006) where agency can be understood as the power to act, manifesting itself as affecting matters, making decisions and choices, and taking stances on work (Vähäsantanen 2015). This is a subject-centred sociocultural view of agency that emphasises the interdependence of individual learners and the sociocultural context, as well as the existence of agency at the individual/subject level (Eteläpelto et al. 2013),

which implies that individual agency and social context are analytically separate but mutually constitutive and interdependent (Jääskelä, A. M. Poikkeus, and K. Vasalampi et al. 2017).

In the learning context, Code (2010) refers to the concept of 'agency for learning (AFL)' as an extension of SCT that incorporates aspects of developmental, historical, and sociocultural theorising and emphasises the integral nature of agency to regulate essential processes for learning. Agency acts as an intentional, self-generated, and externally influenced 'emergent capacity' that 'is manifested in individual abilities to interact with personal, behavioral, environmental, and social factors in the learning context' (Code 2010, 2). Agency is explained by the interaction of its component influences, manifested in the individual's intentionality, forethought, self-regulation, and self-efficacy.

Method

The present review of the research on SAHE was conducted through bibliometric analysis. Bibliometric reviews are a variant of systematic reviews that rely on quantitative methods to analyse patterns of knowledge in a delimited body of literature (Hallinger and Kovačević 2022).

Search criteria

The time frame for this review encompassed the period from 2000 through August 2022. The start date coincides with the emergence of an outcome orientation in quality assurance in higher education that put a greater emphasis on accountability, outcomes, and results than on inputs (Stensaker and Sweetman 2014). With this novel approach, student agency becomes more relevant evidence for students' learning and contexts with greater influence on the improvement of higher education.

The search was conducted using the Scopus search engine. Scopus and Web of Science (WoS) have been the two most widely used databases for bibliometric analyses (Pranckutė 2021). Scopus was selected because it provides wider coverage of journals than WoS, indexing 66.07% more unique journals in comparison with WoS (Singh et al. 2021). In addition, Scopus covers more interdisciplinary publications (Meho and Rogers 2008), which is more enriching for the topic addressed in this article.

The review focused on articles published in Scopus-indexed journals, either in English or Spanish. Books, book chapters, and conference papers were excluded, considering that peer-reviewed journal articles undergo a more rigorous publication process with greater trustworthiness in academia (Hallinger 2020).

Identification of sources

The review for this study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, which specify steps for identifying documents for use in systematic reviews of research (Page et al. 2021). The article selection was conducted based on a selected search string, a method that facilitates the inclusion of a broad range of journals and subject categories (Leydesdorff, Carley, and Rafols 2013).

The following string search was used in Scopus without placing limitations by subject area or source title: TITLE-ABS-KEY ('student agency' OR 'learner agency' OR 'agency for learning' OR 'agentic engagement') AND TITLE-ABS-KEY ('universit*' OR 'High* education' OR 'undergraduate education' OR 'postsecondary education' OR 'post-secondary education' OR 'tertiary education' OR 'college'). The rationale behind the selection of these terms was that the research was intended to identify different perspectives from which the concept of agency was approached. Therefore, the search did not subscribe to any particular theory but focused on generic terms used in reference to agency.

The Scopus search yielded a total of 280 records of articles published between 2000 and August 2022. Two duplicate records were removed before screening. Then, the titles, abstracts, and

keywords of the remaining 278 documents were scanned to confirm their relevance. 54 articles were excluded as being related to other research areas (such as elementary, secondary, and vocational education) or for being irrelevant. This left a final database of 224 articles for the bibliometric analysis (see Figure 1).

Data extraction and analysis

Bibliographic data for the 224 journal articles selected for this review were downloaded in a comma-separated values (.csv) file that included author names, article titles, years of publication, source titles, abstracts, and keywords.

The bibliometric analysis was initially supported by performance indicators that included descriptive statistics to identify the growth trajectory and geographic distribution of the literature. Descriptive statistical analyses were performed with Microsoft Office Excel and with the analytical tools provided through Scopus. Tableau software was used to create a heat map showing the geographical distribution of the literature. Then, the study was supported by science mapping, using co-citation to identify the intellectual structure of SAHE and main topics. The science mapping
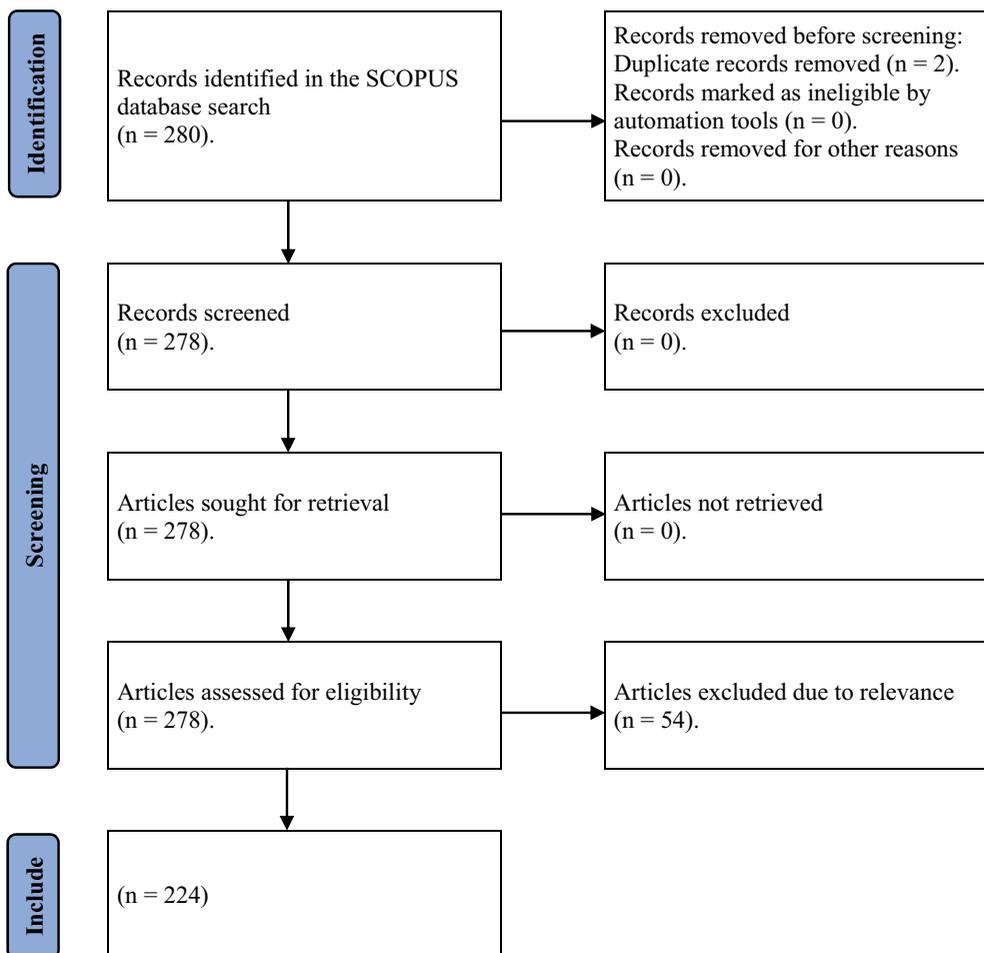

Figure 1. PRISMA flow diagram detailing steps in the identification and screening of sources. Source. Page et al. (2021).

analyses used in this review were conducted in the VOSviewer software tool version 1618 (van Eck and Waltman 2022).

Results

This section presents the results with respect to the growth trajectory and geographic distribution as well as the intellectual structure of the SAHE knowledge base.

Growth trajectory and geographic distribution

The SAHE corpus composed of 224 articles is not evenly distributed throughout the period 2000–2022. The growth trajectory of this literature showed low growth during the 2000s, moderate growth during the early 2010s, and rapid growth since 2017. In total, 80% of the identified Scopus-indexed knowledge base on SAHE was published between 2017 and August 2022 (see Figure 2).

The heat map in Figure 3 shows the geographical distribution of the SAHE articles published since 2000. The studies collected for this bibliometric review were authored in 44 different countries. The map shows the dominance of three countries: the United States (47), Australia (44), and the United Kingdom (43). These three countries accounted for 60% of the documents in the database of Scopus-indexed journal articles. Other notable contributors to the SAHE knowledge base were scholars from Canada (13), South Africa (13), China (11), Finland (10), Hong Kong (9), South Korea (9), and Japan (7). In sum, 10 countries account for 92% of the SAHE knowledge base.

Intellectual structure of SAHE knowledge base

Next, author co-citation analysis (ACA) was used to map the knowledge domain and depict the scientific intellectual structure underlying published theory and research in SAHE. White and McCain (1998) proposed the ACA as a method in bibliometrics to provide a visual representation of the cognitive/intellectual structure of an academic discipline, a field of inquiry, or a journal. VOSviewer was employed to generate an author co-citation map that 'visualizes similarities' in the scholarship of authors by setting a threshold of at least 10
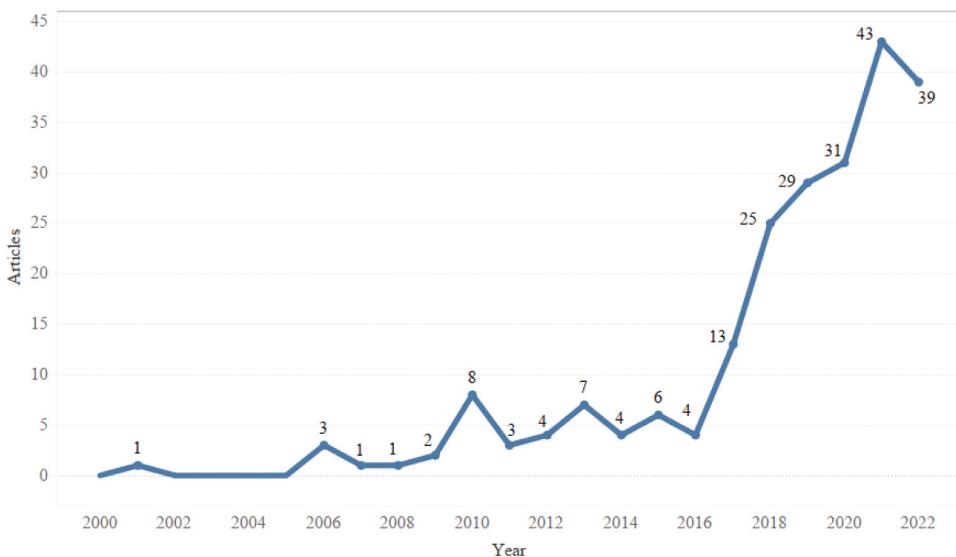

Figure 2. Articles related to SAHE published between 2000 and 2022.
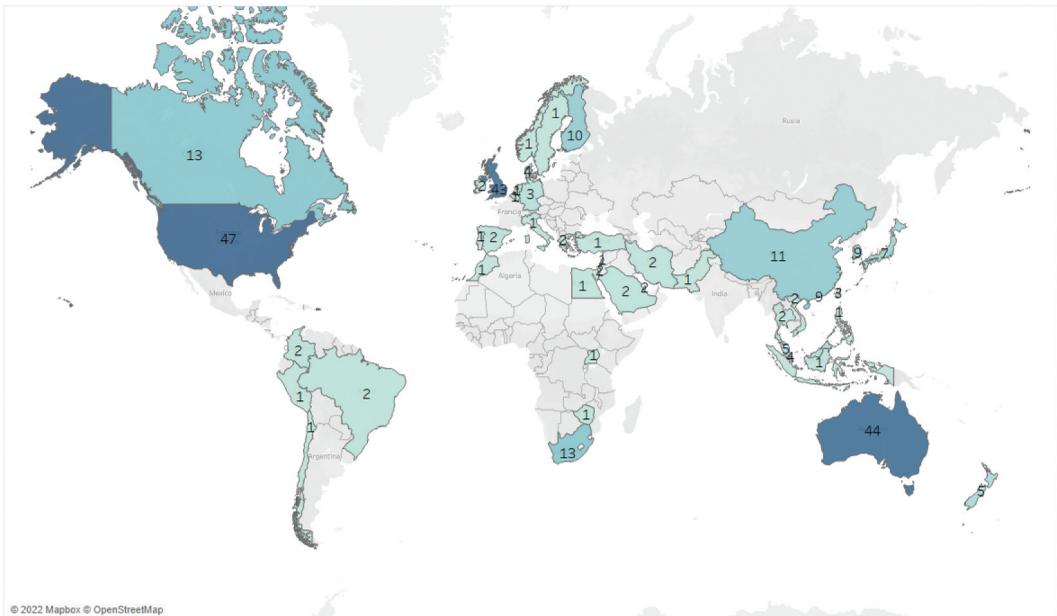
Figure 3. Global distribution of the SAHE literature, 2000 to 2022.
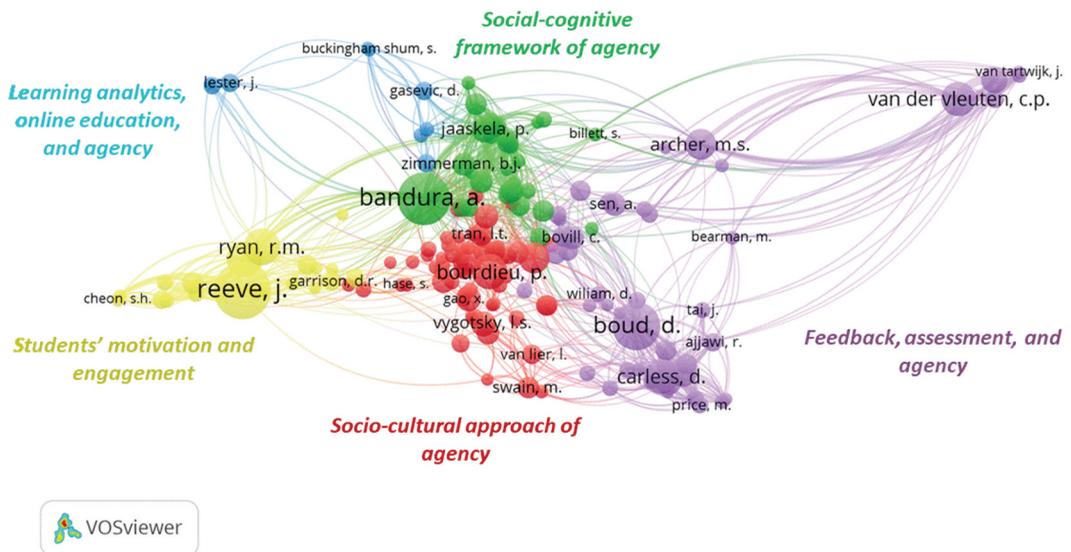
Figure 4. Author co-citation map of the literature on SAHE, 2000 to 2022 (n = 13.507 authors in the author co-citation network). Map generated in VOSviewer (van Eck and Waltman 2022) using a threshold of 10 citations per author, yielding a display of 172 authors.

citations with a display of 172 authors (see Figure 4). The map groups scholars into 'clusters' that represent 'schools of thought' in which similar theoretical perspectives and lines of inquiry are shared by groups of authors (Börner, Chen, and Boyack 2003). The co-citation map is composed of nodes, each representing a different author. The relative frequency of author co-citations is reflected in the size of the node associated with a given scholar. The

density of lines or 'links' connecting scholars reflects co-citations of the scholars by other authors.

The author co-citation map indicates that the SAHE literature is currently composed of five 'schools of thought': socio-cultural approach of agency; feedback, assessment, and agency; social-cognitive framework of agency; students' motivation and engagement; and learning analytics, online education, and agency.

Sociocultural approach to agency

The largest school (red cluster) consisted of authors who have provided the theoretical foundations of student agency under a sociocultural approach. In social sciences, the conceptualisation of the relationship between structure and agency has provided an important framework for understanding how people actively and intentionally overcome the constraints they face in everyday life. Bourdieu (1977) introduced the notion of habitus to highlight how structures produce and shape individual agency while that agency simultaneously reshapes structures, which means that agency enactment is derived from students' habitus. Biesta and Tedder (2007) conceptualised agency under a life-course perspective. The achievement of agency comes from the interaction of 'individual efforts, available resources and contextual and structural factors as they come together in particular and, in a sense, always unique situations' (p. 137). This ecological understanding of agency is aligned with the perspectives and constructs of international students as active self-forming agents who counteract the barriers in their social and learning experiences abroad through their capacities to shape and control their own learning, to proactively adopt different strategies to engage with the teaching–learning community, and to co-cultivate knowledge (Marginson 2014).

Within Socio-Cultural Theory, learning and development are interdependent on humans' external sociocultural and historical contexts (Vygotsky 1978). Learning is a contextual social endeavour that is promoted by social interaction, seen as situated participation and the (re)construction of selves (Lantolf 2000). From this perspective, student agency emerges from learners' participation in social interactions as a form of co-construction and (re)negotiation (Lantolf and Pavlenko 2001). In language learning, the importance of student agency is increasingly recognised Peirce (1995, 2000) relates success in language acquisition with individual characteristics, social interaction, and the environment as a dynamic system.

Feedback, assessment, and agency

The second largest school of thought (purple cluster) comprises two sub-categories that are closely related and that exercise a powerful influence on students' learning progress and achievement (Hattie and Timperley 2007; van der Vleuten 1996). One sub-cluster refers to the transition in higher education practices from providing students with unidirectional feedback, typically used in transmission-oriented models of education, to involving them more actively in dialogical forms of interaction aimed at taking control of their courses of action, or agency, to improve their learning. Scholars within this field position students in active roles that transcend the notion of being solicitors of information (Casanova, Alsop, and Huet 2021; D. R. Carless, Joughin, and Lui 2010; Boud and Molloy 2013) and emphasise that the reciprocal dialogue between the student and other educational agents should be geared towards shared meanings and interpretations, clarifications, and, particularly, to the understanding of what 'quality' implies (D. R. Carless, Joughin, and Lui 2010; Boud and Molloy 2013).

The second sub-category within this cluster is related to the role of assessment. van der Vleuten (1996), whose work was based on research in the health sciences, discussed crucial issues in the assessment of professional competence and proposed that assessment practices had to deal with issues of validity, reliability, impact, acceptability, and costs. A key point that emerges in this group is the advocacy for careful curricular and instructional design that promotes better assessment

practices and programs to foster effective learning and the use of a robust body of research to nurture such practices (van der Vleuten, Schuwirth, and Scheele et al. 2010). Linked to assessment and feedback practices are philosophical notions on the capability approach and its connection to agency (Sen 2004, 2005), as well as the capacity of humans to be reflexive and active agents who can monitor not only themselves but their societies (2007; Archer 2003).

Social-cognitive framework for agency

This third school of thought (green cluster) consists of authors who have conceptualised student agency under Social Cognitive Theory (SCT). In a social-cognitive framework, agency is inherently interactional because individuals constitute beliefs about their capabilities to have control over events that influence their lives (Bandura 1986). Agency is constructed through the interaction of internal personal factors, behavioural patterns, and environmental influences that determine human functioning (Bandura 2001, 2006). In line with SCT, Jääskelä, A. M. Poikkeus, and K. Vasalampi et al. (2017) constructed a multidimensional view to analyse SAHE, focusing on students' experiences and senses of agency, 'manifested in their perceptions of personal, relational and situational resources and opportunities for practicing agency' (p. 2064). Although agency is related to individual resources (e.g. efficacy beliefs and competence, intrinsic motivation, and participation tendencies), it is interpreted as an individual action that uses the resources of the environment, rather than as a stable characteristic or an existing capacity of an individual. Zimmerman (1995) contributes to the sociocognitive conceptualisation of agency with his approach to self-management through self-reflection, self-regulation, and self-efficacy. Students enact agency through their ability to regulate, control, and monitor their cognitive, affective, and behavioural processes when interacting with factors in the environment (Zimmerman 2000). Klemenčič (2015a) also encompasses a sociocognitive approach when referring to student agency as the quality of students' self-reflective and intentional action and interaction with their environment. Student agency is based on two premises: students' agentic possibilities, referring to students' real opportunities and positive freedoms to do and to be what they value within university contexts; and students' agentic orientations, referring to students' predispositions and wills to enactments of agency (Klemenčič 2015b).

Students' motivation and engagement

The fourth largest school of thought (yellow cluster) is comprised of authors whose research examines students' motivation and engagement. These scholars have considered different dimensions of engagement, including behavioural, emotional, cognitive, and agentic dimensions, as proposed by J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris (2004) and Reeve and C. M. Tseng (2011). Behavioural engagement refers to students' participation, efforts, and positive conduct. Emotional engagement includes having interest, curiosity, and enthusiasm in-class activities. Cognitive engagement is associated with students' psychological efforts to master the necessary knowledge and skills as well as self-regulatory and personal learning strategies. Lastly, agentic engagement is defined as students' initiatives in contributing proactively to the flow of instruction they receive (Reeve and C. M. Tseng 2011). Learners can also contribute meaningfully to teaching–learning processes, not only trying to learn but also seeking to create motivationally a more supportive learning environment for themselves (Reeve, S. H. Cheon, and Jang 2020).

Self-Determination Theory (SDT) offers a theoretical framework for understanding the motivational factors that improve students' engagement and overall academic performance (Reeve 2012). Under this approach, students have three inner motivational resources that allow them to be innately active and capable of engaging themselves constructively in learning settings: competence, autonomy, and relatedness (Ryan and Deci 2017). According to SDT, an autonomy- supportive teaching style also contributes to students' motivation and engagement (Jang, J. Reeve, and M. Halusic 2016). The autonomy-supportive teaching style is associated with the degree to which

students perceive their teachers as providing conditions that encourage them to embrace a sense of psychological freedom and to express their interests, which is reflected in providing opportunities for choice and decision-making with respect to the learning process (Reeve 2009; Jang, E. J. Kim, and J. Reeve 2012).

Learning analytics, online education, and agency

Scholars of this school of thought (blue cluster) focus on the power of learning analytics to examine the influence of external and internal conditions such as goal orientation, cognitive load, and beliefs on students' trajectories, especially in online education (Gašević and G. Siemens 2012; Gašević, S. Dawson, and G. Siemens 2015). These studies emphasise the maturity of higher education institutions in using learning analytics and the dangers of using generic forms of analysis that could be decontextualised (Gašević, S. Dawson, and T. Rogers et al. 2016), the role that learning analytics play in the development of self-regulatory skills (Gašević, S. Dawson, and T. Rogers et al. 2016; Gašević, S. Dawson, and G. Siemens 2015), and flipped learning models (Jovanovic et al. 2017). A concern for some scholars in the use of learning analytics involves ethical and moral dilemmas in the acquisition, management, and use of students' information (Prinsloo, Slade, and Khalil 2022).

Discussion

The present bibliometric review aims to provide insights into the structure of the knowledge base and key theoretical literature in the field of SAHE. Performance analysis and scientific mapping were used to analyse 224 Scopus-indexed articles published between 2000 and august 2022.

The findings indicate that the scholarship on SAHE is not evenly distributed across the period 2000–2022. This corpus first emerged during the early 2000s and grew slowly over that decade. Subsequently, there was moderate growth during the early 2010s. Finally, a dramatic increase in publications is observed in the past few years: 80% of the identified Scopus-indexed knowledge base on SAHE was published between 2017 and August 2022. This publication trajectory suggests that this is a maturing literature that is gaining legitimacy in the academic community. This acceleration may be linked to universities' current focus on student engagement through partnership, which is an area that could be explored further.

Although published articles on SAHE were authored in 44 different societies, 60% of this review corpus originated in three countries: the United States, Australia, and the United Kingdom. A positive aspect, however, is that this imbalance has been reduced over the past five years. This review found that 48% of SAHE articles published between 2017 and 2022 came from sources other than those 3 nations. Moreover, 46% of these articles were authored by scholars located in the 'emerging regions' of Asia, Africa, and Latin America. Nonetheless, the world map of SAHE knowledge still shows many 'blank spots', representing societies about which there is little or no internationally accessible, formal knowledge about SAHE.

The present study's author co-citation analysis sought to visualise the intellectual roots of the SAHE knowledge base. Five 'schools of thought' were identified as the pillars of this emerging literature (1): a socio-cultural approach to agency (2); a social-cognitive framework for agency (3); feedback, assessment, and agency (4); students' motivation and engagement; and (5) learning analytics, online education, and agency. Although examination of the 224 articles selected for review in the present study showed varied conceptualisations of student agency, the co-citation analysis confirmed the relevance and 'centrality' of the Socio-Cultural and the Social-Cognitive Theories on SAHE discourse. From this perspective, it is possible to understand the meaning that individuals attribute to a particular social activity, rooted in their personal histories and embedded in ecological influences (Biesta and Tedder 2007; Vygotsky 1978). Agency is thus characterised as an individual feature but also as a feature of the environment. Students act by means of their environment rather than simply within

an environment and develop agency through the interplay of individual and sociocultural, interactional, and contextual aspects of learning (Eteläpelto et al. 2013). This stresses the importance of educational constructions of agency that fully address the interrelationship between individuals and their environment, as previously noted by Billett (2008) and Hitlin and Elder (2007).

The intellectual lineage of SAHE is complemented by the identification of three 'emerging' schools of thought. The Feedback and Assessment school of thought underlines the importance of these constructs in the development of students' agency. Because feedback is co-constructed through reciprocal dialogue between teachers, students, and others and requires sequenced opportunities in the curriculum to flourish (D. Carless and Boud 2018), students should be encouraged to play an active role in learning by generating and soliciting their own feedback. Assessment also provides opportunities to foster agency and promote learning effectively. As previously proposed by van der Vleuten, Schuwirth, and Scheele et al. (2010), it is essential to work on assessment programs that use methods and procedures that are informed by evidence of their utility and that promote societal accountability.

The Motivation and Student Engagement school of thought emphasises the importance of agentic engagement as a new dimension of engagement in which students contribute to their learning process in a constructive way. Self-Determination Theory is essential for understanding students' inner motivational resources that help them to be innately active and capable of engaging themselves constructively in learning settings (Reeve, S. H. Cheon, and Jang 2020). Thus, there is a great opportunity to improve learning if higher education institutions motivate learners to express their preferences, interests, and needs, to ask questions, to express their attitudes, to make suggestions, and to ask for elaboration. Attention should also be paid to learning environments since they affect students' motivation (and *vice versa*).

Finally, the Learning Analytics, Online Education, and Agency school of thought reflects the increasing capacity of contemporary technologies to improve understanding of students' learning needs and to use that understanding to influence their learning and progression positively (Slade and Prinsloo 2013). Particularly, learning analytics emerges as a novel approach to understanding human experiences and behaviour in learning situations which could help foster student agency in areas such as student self-regulation, academic advising, and teachers' pedagogical knowledge as previously observed by Jääskelä, V. Heilala, and T. Kärkkäinen et al. (2021).

Limitations

Two limitations should be noted with respect to the present review of research. The first is associated with the review methodology used. Even though bibliometric analyses make it possible to analyse the 'meta-data' related to documents constituting a research field, this kind of analysis does not provide substantive insights into the findings or quality of that research. In addition, bibliometric review is a method that relies on citation analysis, which tends to emphasise the dominant patterns that evolve within a literature. This can lead to such reviews ignoring non-dominant but potentially important features of the knowledge base under examination.

A second limitation is that, although Scopus is a highly valued academic database, it may not include all relevant documents produced in the SAHE field. In addition, the present study focused on journal articles but excluded books, chapters in books, and conference papers. Therefore, the complete SAHE literature base is greater than the set of documents selected for this review. To a certain extent, this limitation was mitigated using author co-citation analysis (ACA), a method that not only examines the documents selected for the review but also captures documents outside of the review through the reference lists of the selected documents.

Conclusions

Agency has emerged as an increasingly important concept in higher education and can be seen as an essential 21st-century learning skill that will help graduates thrive and achieve improved individual and societal well-being in the economies of the future and scenarios characterised by uncertainty and disruption. This article mapped the intellectual structure of SAHE. Based on this analysis, two important conclusions emerge. One concerns the imbalance in the production of literature about agency around the world, which emphasises the need to foster research in traditionally underrepresented countries and examine how agency can strengthen students' learning in those contexts. Secondly, the five schools of thought identified as the intellectual structure of SAHE provide robust and useful intellectual leverage for scholars and practitioners interested in learning and implementing changes oriented towards strengthening students' agency. In particular, the constructivist and sociocultural perspectives provide useful insights into individual, interactional, and contextual aspects that are relevant for personalising and increasing the dynamism and potential of students' academic experiences so that they undertake more active roles in managing their own learning.

Disclosure statement

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References

Archer, M. 2003. *Structure, Agency and the Internal Conversation*. Cambridge: Cambridge University Press.
Archer, M. 2007. *Making Our Way through the World: Human Reflexivity and Social Mobility*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511618932.
Bandura, A. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory. In Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: PrenticeHall.
Bandura, A. 2001. "Social Cognitive Theory: An Agentic Perspective." *Annual Review of Psychology* 52 (1): 1–26. https://doi.org/10.1146/annurev.psych.52.1.1.
Bandura, A. 2006. "Toward a Psychology of Human Agency." *Perspectives on Psychological Science* 1 (2): 164–180. https://doi.org/10.1111/j.1745-6916.2006.00011.x.
Bell, S. 2010. "Project-Based Learning for the 21st Century: Skills for the Future." *The Clearing House: A Journal of Educational Strategies, Issues and Ideas* 83 (2): 39–43. https://doi.org/10.1080/00098650903505415.
Biesta, G., and M. Tedder. 2007. "Agency and Learning in the Lifecourse: Towards an Ecological Perspective." *Studies in the Education of Adults* 39 (2): 132–149. https://doi.org/10.1080/02660830.2007.11661545.
Billett, S. 2008. "Learning Throughout Working Life: A Relational Interdependence between Personal and Social Agency." *British Journal of Educational Studies* 56 (1): 39–58. https://doi.org/10.1111/j.1467-8527.2007.00394.x.
Billett, S., T. Fenwick, M. Somerville, A. Eteläpelto, and J. Saarinen. 2006. *Work, Subjectivity and Learning: Understanding Learning through Working Life*. Dordrecht: Springer.
Börner, K., C. Chen, and K. W. Boyack. 2003. "Visualizing Knowledge Domains." *Annual Review of Information Science and Technology* 37 (1): 179–255. https://doi.org/10.1002/aris.1440370106 .

Boud, D., and E. Molloy. 2013. "Rethinking Models of Feedback for Learning: The Challenge of Design." *Assessment and Evaluation in Higher Education* 38 (6): 698–712. https://doi.org/10.1080/02602938.2012.691462.

Bourdieu, P. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.

Carless, D., and D. Boud. 2018. "The Development of Student Feedback Literacy: Enabling Uptake of Feedback." *Assessment and Evaluation in Higher Education* 43 (8): 1315–1325. https://doi.org/10.1080/02602938.2018.1463354.

Carless, D. R., G. Joughin, and N.-F. Lui. 2010. *How Assessment Supports Learning: Learning-Oriented Assessment in Action*. Abingdon: Routledge.

Casanova, D., G. Alsop, and I. Huet. 2021. "Giving Away Some of Their Powers! Towards Learner Agency in Digital Assessment and Feedback." *Research and Practice in Technology Enhanced Learning* 16 (20). https://doi.org/10.1186/s41039-021-00168-6.

Code, J. 2010. *Assessing Agency for Learning. Ph.D. Doctoral Dissertation*. [Simon Fraser University]. Burnaby. https://summit.sfu.ca/_flysystem/fedora/sfu_migrate/11308/etd6068_JCode.pdf.

Eteläpelto, A., K. Vähäsantanen, P. Hökkä, and S. Paloniemi. 2013. "What Is Agency? Conceptualizing Professional Agency at Work." *Educational Research Review* 10:45–65. https://doi.org/10.1016/j.edurev.2013.05.001.

Foucault, M. 1975. *Discipline and Punish: The Birth of the Prison*. New York, NY: Random House.

Fredricks, J. A., P. C. Blumenfeld, and A. H. Paris. 2004. "School Engagement: Potential of the Concept, State of the Evidence." *Review of Educational Research* 74 (1): 59–109. https://doi.org/10.3102/00346543074001059.

Gašević, D., S. Dawson, T. Rogers, and D. Gasevic. 2016. "Learning Analytics Should Not Promote One Size Fits All: The Effects of Instructional Conditions in Predicting Academic Success." *Internet and Higher Education* 28:68–84. https://doi.org/10.1016/j.iheduc.2015.10.002.

Gašević, D., S. Dawson, and G. Siemens. 2015. "Let´S Not Forget: Learning Analytics are about Learning." *Techtrends* 59 (1): 64–71. https://doi.org/10.1007/s11528-014-0822-x.

Gašević, D., and G. Siemens. 2012. "Guest Editorial - Learning and Knowledge Analytics." *Educational Technology & Society* 15 (3): 1–2. http://www.jstor.org/stable/jeductechsoci.15.3.1.

Giddens, A. 1984. *The Constitution of Society*. Oakland, CA: University of California Press.

Griffiths, D. A., M. Inman, H. Rojas, and K. Williams. 2018. "Transitioning Student Identity and Sense of Place: Future Possibilities for Assessment and Development of Student Employability Skills." *Studies in Higher Education* 43 (5): 891–913. https://doi.org/10.1080/03075079.2018.1439719.

Hallinger, P. 2020. "Science Mapping the Knowledge Base on Educational Leadership and Management from the Emerging Regions of Asia, Africa and Latin America, 1965–2018." *Educational Management Administration and Leadership* 48 (2): 209–230. https://doi.org/10.1177/1741143218822772.

Hallinger, P., and J. Kovačević. 2019. "A Bibliometric Review of Research on Educational Administration: Science Mapping the Literature, 1960 to 2018." *Review of Educational Research* 89 (3): 335–369. https://doi.org/10.3102/0034654319830380.

Hallinger, P., and J. Kovačević. 2022. "Mapping the Intellectual Lineage of Educational Management, Administration and Leadership, 1972–2020." *Educational Management Administration and Leadership* 50 (2): 192–216. https://doi.org/10.1177/17411432211006093.

Hattie, J., and H. Timperley. 2007. "The Power of Feedback." *Review of Educational Research* 77 (1): 81–112. https://doi.org/10.3102/003465430298487.

Hitlin, S., and G. Elder. 2007. "Time, Self and the Curiously Abstract Concept of Agency." *Sociological Theory* 25 (2): 170–191. https://doi.org/10.1111/j.1467-9558.2007.00303.x.

Ilomäki, L., S. Paavola, M. Lakkala, and A. Kantosalo. 2016. "Digital Competence - An Emergent Boundary Concept for Policy and Educational Research." *Education and Information Technologies* 21 (3): 655–679. https://doi.org/10.1007/s10639-014-9346-4.

Jääskelä, P., V. Heilala, T. Kärkkäinen, and P. Häkkinen. 2021. "Student Agency Analytics: Learning Analytics as a Tool for Analyzing Student Agency in Higher Education." *Behaviour and Information Technology* 40 (8): 790–808. https://doi.org/10.1080/0144929X.2020.1725130.

Jääskelä, P., A. M. Poikkeus, K. Vasalampi, U. M. Valleala, and H. Rasku-Puttonen. 2017. "Assessing Agency of University Students: Validation of the AUS Scale." *Studies in Higher Education* 42 (11): 2061–2079. https://doi.org/10.1080/03075079.2015.1130693.

Jang, H., E. J. Kim, and J. Reeve. 2012. "Longitudinal Test of Self-Determination Theory's Motivation Mediation Model in a Naturally Occurring Classroom Context." *Journal of Educational Psychology* 104 (4): 1175–1188. https://doi.org/10.1037/a0028089.

Jang, H., J. Reeve, and M. Halusic. 2016. "A New Autonomy-Supportive Way of Teaching that Increases Conceptual Learning: Teaching in Students' Preferred Ways." *Journal of Experimental Education* 84 (4): 686–701. https://doi.org/10.1080/00220973.2015.1083522.

Jovanovic, V. M., D. Tombolato-Terzic, D. P. Richards, P. Pazos, M. McKittrick, J. Romberger, and O. Popescu (2017). "Developing a Faculty Learning Community to Support Writing across Different STEM Disciplines." *,ASEE Annual Conference and Exposition, Conference Proceedings*, Ohio, OH, 2017–June. https://doi.org/10.18260/1-2–28130 .

Klemenčič, M. 2015a. "What Is Student Agency? an Ontological Exploration in the Context of Research on Student Engagement." In *Student Engagement in Europe: Society, Higher Education and Student Governance, Council of Europe*

Higher Education Series No. 20, edited by M. Klemenčič, S. Bergan, and R. Primožič, 11–29. Strasbourg: Council of Europe Publishing.

Klemenčič, M. 2015b. "Ahead of 2015 Bologna Ministerial Conference: A New Agenda for the European Higher Education Area." *European Journal of Higher Education* 5 (1): 1–3. https://doi.org/10.1080/21568235.2015.998405.

Lantolf, J. 2000. *Sociocultural Theory and Second Language Learning*. Oxford: Oxford University Press.

Lantolf, J., and A. Pavlenko. 2001. "(S)econd (L)anguage (A)ctivity Theory: Understanding Second Language Learners as People." In *Learner Contributions to Language Learning: New Directions in Research*, edited by M. P. Breen, 141–158. Glenview, IL: Pearson Education.

Leydesdorff, L., S. Carley, and I. Rafols. 2013. "Global Maps of Science Based on the New Web of Science Categories." *Scientometrics* 94 (2): 589–593. https://doi.org/10.1007/s11192-012-0784-8.

Lindgren, R., and R. McDaniel. 2012. "Transforming Online Learning through Narrative and Student Agency." *Journal of Educational Technology & Society* 15 (4): 344–355. http://www.jstor.org/stable/jeductechsoci.15.4.344.

Marginson, S. 2014. "Student Self-Formation in International Education." *Journal of Studies in International Education* 18 (1): 6–22. https://doi.org/10.1177/1028315313513036.

Marín, V. I., B. D. Benito, and A. Darder. 2020. "Technology-Enhanced Learning for Student Agency in Higher Education: A Systematic Literature Review." *Interaction Design and Architecture(S)* 45 (45): 15–49. https://doi.org/10.55612/s-5002-045-001.

Martin, J. 2004. "Self-Regulated Learning, Social Cognitive Theory, and Agency." *Educational Psychologist* 39 (2): 135–145. https://doi.org/10.1207/s15326985ep3902_4.

Meho, L. I., and Y. Rogers. 2008. "Citation Counting, Citation Ranking, and H-Index of Human-Computer Interaction Researchers: A Comparison between Scopus and Web of Science." *Journal of the American Society for Information Science and Technology* 59 (11): 1711–1726. https://doi.org/10.1002/asi.20874 .

OECD. (2019). "*OECD the Future of Education and Skills: Education 2030.*" *OECD Learning Compass 2030. A Series of Concept Notes*. OECD Publishing.

Page, M. J., J. E. McKenzie, P. M. Bossuyt, I. Boutron, T. C. Hoffmann, C. D. Mulrow, L. Shamseer, J. M. Tetzlaff, E. A. Akl, S. E. Brennan, et al. 2021. "The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews." *Systematic Reviews* 10 (1): 89. https://doi.org/10.1186/s13643-021-01626-4.

Paloniemi, S., and K. Collin. 2012. "Discursive Power and Creativity in Inter-Professional Work." *Vocations and Learning* 5 (1): 23–40. https://doi.org/10.1007/s12186-011-9064-7.

Peirce, B. N. 1995. "Social Identity, Investment, and Language Learning." *TESOL Quarterly* 29 (1): 9–31. https://doi.org/10.2307/3587803.

Peirce, B. N. 2000. *Identity and Language Learning: Gender, Ethnicity, and Educational Change*. Harlow: Pearson Education.

Pranckutė, R. 2021. "Web of Science (Wos) and Scopus: The Titans of Bibliographic Information in Today's Academic World." *Publications* 9 (1): 12. https://doi.org/10.3390/publications9010012 .

Price, M., K. Handley, and J. Millar. 2011. "Feedback: Focusing Attention on Engagement." *Studies in Higher Education* 36 (8): 879–896. https://doi.org/10.1080/03075079.2010.483513.

Prinsloo, P., S. Slade, and M. Khalil. 2022. "The Answer Is (Not Only) Technological: Considering Student Data Privacy in Learning Analytics." *British Journal of Educational Technology* 53 (4): 876–893. https://doi.org/10.1111/bjet.13216 .

Pym, J., and R. Kapp. 2013. "Harnessing Agency: Towards a Learning Model for Undergraduate Students." *Studies in Higher Education* 38 (2): 272–284. https://doi.org/10.1080/03075079.2011.582096.

Reeve, J. 2009. "Why Teachers Adopt a Controlling Motivating Style toward Students and How They Can Become More Autonomy Supportive." *Educational Psychologist* 44 (3): 159–175. https://doi.org/10.1080/00461520903028990.

Reeve, J. 2012. "A self-Determination Theory Perspective on Student Engagement." In *Handbook of Research on Student Engagement*, edited by S. L. Christenson, A. L. Reschly, and C. Wylie, 149–172. Boston, MA: Springer. https://doi.org/10.1007/978-1-4614-2018-7_7.

Reeve, J., S. H. Cheon, and H. Jang. 2020. "How and Why Students Make Academic Progress: Reconceptualizing the Student Engagement Construct to Increase Its Explanatory Power." *Contemporary Educational Psychology* 62:1–12. https://doi.org/10.1016/j.cedpsych.2020.101899.

Reeve, J., and C. M. Tseng. 2011. "Agency as a Fourth Aspect of Students' Engagement during Learning Activities." *Contemporary Educational Psychology* 36 (4): 257–267. https://doi.org/10.1016/j.cedpsych.2011.05.002.

Ryan, R. M., and E. L. Deci. 2000. "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions." *Contemporary Educational Psychology* 25 (1): 54–67. https://doi.org/10.1006/ceps.1999.1020.

Ryan, R. M., and E. L. Deci. 2017. *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York, NY: Guilford Press.

Saarela, M., V. Heilala, P. Jaaskela, A. Rantakaulio, and T. Karkkainen. 2021. "Explainable Student Agency Analytics." *IEEE Access* 9:137444–137459. https://doi.org/10.1109/ACCESS.2021.3116664.

Schunk, D. H., and B. J. Zimmerman. 2012. "Competence and Control Beliefs: Distinguishing the Means and Ends." In *Handbook of Educational Psychology*, edited by P. A. Alexander and P. H. Winne, 349–367. Abingdon: Routledge.

Sen, A. 2004. "Elements of a Theory of Human Rights." *Philosophy & Public Affairs* 32 (4): 315–356. https://doi.org/10.1111/j.1088-4963.2004.00017.x.

Sen, A. 2005. "Human Rights and Capabilities." *Journal of Human Development* 6 (2): 151–166. https://doi.org/10.1080/14649880500120491.

Singh, V. K., P. Singh, M. Karmakar, J. Leta, and P. Mayr. 2021. "The Journal Coverage of Web of Science, Scopus and Dimensions: A Comparative Analysis." *Scientometrics* 126 (6): 5113–5142. https://doi.org/10.1007/s11192-021-03948-5.

Slade, S., and P. Prinsloo. 2013. "Learning Analytics: Ethical Issues and Dilemmas." *American Behavioral Scientist* 57 (10): 1510–1529. https://doi.org/10.1177/0002764213479366.

Stenalt, M. H., and B. Lassesen. 2022. "Does Student Agency Benefit Student Learning? A Systematic Review of Higher Education Research." *Assessment and Evaluation in Higher Education* 47 (5): 653–669. https://doi.org/10.1080/02602938.2021.1967874.

Stensaker, B., and R. Sweetman. 2014. "Impact of Assessment Initiatives on Quality Assurance." In *Higher Education Learning Outcomes Assessment*, edited by H. Coates, 237–259. Frankfurt: Peter Lang Publishing Group.

Tynjälä, P. 2013. "Toward A 3-P Model of Workplace Learning: A Literature Review." *Vocations and Learning* 6 (1): 11–36. https://doi.org/10.1007/s12186-012-9091-z.

Vähäsantanen, K. 2015. "Professional Agency in the Stream of Change: Understanding Educational Change and Teachers' Professional Identities." *Teaching and Teacher Education* 47:1–12. https://doi.org/10.1016/j.tate.2014.11.006.

van der Vleuten, C. P. M. 1996. "The Assessment of Professional Competence: Developments, Research and Practical Implications." *Advances in Health Sciences Education* 1 (1): 41–67. https://doi.org/10.1007/BF00596229.

van der Vleuten, C. P. M., L. W. T. Schuwirth, F. Scheele, E. W. Driessen, and B. Hodges. 2010. "The Assessment of Professional Competence: Building Blocks for Theory Development." *Best Practice & Research: Clinical Obstetrics & Gynaecology* 24 (6): 703–719. https://doi.org/10.1016/j.bpobgyn.2010.04.001.

van Eck, J. N., and L. Waltman. 2022. *VOSviewer Software 1.1.16*. Leiden: University of Leiden.

Vygotsky, L. 1978. *Mind in Society: The Development of Higher Mental Processes*. Edited by M. Cole, V. Jolm-Steiner, S. Scribner, and E. Souberman. Cambridge, MA: Harvard University Press. https://doi.org/10.2307/j.ctvjf9vz4.

White, H. D., and K. W. McCain. 1998. "Visualizing a Discipline: An Author Co-Citation Analysis of Information Science, 1972-1995." *Journal of the American Society for Information Science* 49 (4): 327–355. https://doi.org/10.1002/(SICI)1097-4571(19980401)49:4.

Zimmerman, B. J. 1995. "Self-Regulation Involves More than Metacognition: A Social Cognitive Perspective." *Educational Psychologist* 30 (4): 217–221. https://doi.org/10.1207/s15326985ep3004_8.

Zimmerman, B. J. 2000. "Attaining self-Regulation: A Social Cognitive Perspective." In *Handbook of self-Regulation*, edited by M. Boekaerts, P. Pintrich, and M. Zeidner, 13–39. San Diego, CA: Academic Press. https://doi.org/10.1016/B978-012109890-2/50031-7.

Zimmerman, B. J., and M. M. Pons. 1986. "Development of a Structured Interview for Assessing Student Use of Self-Regulated Learning Strategies." *American Educational Research Journal* 23 (4): 614–628. https://doi.org/10.3102/00028312023004614.