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Student Engagement: A Principle-Based Concept Analysis

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Abstract: A principle-based concept analysis of student engagement was used to examine the state of the science across disciplines. Four major perspectives of philosophy of science guided analysis and provided a framework for study of interrelationships and integration of conceptual components which then resulted in formulation of a theoretical definition. Findings revealed student engagement as a dynamic reiterative process marked by positive behavioral, cognitive, and affective elements exhibited in pursuit of deep learning. This process is influenced by a broader sociocultural environment bound by contextual preconditions of self-investment, motivation, and a valuing of learning. Outcomes of student engagement include satisfaction, sense of well-being, and personal development. Findings of this analysis prove relevant to nursing education as faculty transition from traditional teaching paradigms, incorporate learner-centered strategies, and adopt innovative pedagogical methodologies. It lends support for curricula reform, development of more accurate evaluative measures, and creation of meaningful teaching-learning environments within the discipline.

Keywords: contextual preconditions, deep learning, principle-based concept analysis, student engagement

The concept of student engagement (SE) commands attention of educators across disciplines and throughout the world. No one denies its significant impact on learning outcomes and students' success in college (Gerber, Mans-Kemp, & Schlechter, 2013; Kuh, 2009; Trowler, 2010; Zepke & Leach, 2010). Nurse educators, in particular, recognize its value as they face formidable challenges to admit, retain, and graduate individuals who must become competent and prepared to function in complex healthcare environments (Casey et al., 2011; Popkess & McDaniel, 2011; Salamonson, Andrew, & Everett, 2009). The projected need for an additional 1.2 million nurses by 2020 (Bureau of Labor Statistics Employment

Projections 2010–2020), coupled with mandates from the Institute of Medicine (IOM) report, *The Future of Nursing: Leading Change, Advancing Health* (2011) and the American Association of Colleges of Nursing's *The Essentials of Baccalaureate Education for Professional Nursing Practice* (2009) challenge the efficacy of traditional teaching practices. More than ever before, nurse educators must promote skills of inquiry, clinical reasoning, and problem-solving in order to achieve new directives for preparation of knowledgeable and proficient nurses. The need exists to identify and implement effective pedagogical strategies that quickly engage students from beginning and throughout the nursing curriculum.

Despite recognition of SE as integral to the learning process, few educators provide a consistent definition of the concept. Instead, most propose pedagogical strategies they believe promote engagement, but without operational definition or means for measurement. The intent of this article, then, is to present findings of a comparative principle-based concept analysis of SE within the context of undergraduate college education and highlight implications pertinent to nursing education.

Method

The principle-based concept analysis method by Penrod and Hupcey (2005) guided an in-depth study of current scientific conceptualizations surrounding SE. The method revealed the most current and best approximation of probable truth and represented an evolving, dynamic science born of multiple realities and worldviews. Everyday meanings related to engagement were not addressed because commonplace concepts with inherent meaning prove insufficient for scientific inquiry (Penrod & Hupcey, 2005). These authors proposed the identification of “existing theoretical strands that define a concept of interest and ultimately...tie and re-tie the conceptual knots to form a stronger, more coherent tapestry of theory. Theory (i.e. the tapestry) is strengthened as the individual strands (i.e. concepts) are clarified and developed” (p. 404).

Student engagement articles, retrieved from the literature, were analyzed according to four foundational

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philosophical principles reflecting epistemological, pragmatic, linguistic and logical perspectives (Morse, Hupcey, Penrod, & Mitcham, 2002). Epistemology directs attention to how a concept fits within a discipline's knowledge base, and assigns maturity according to strong definition and clear differentiation from other concepts. The pragmatic principle addresses concept relevance and utility, with maturity level based on degree to which discipline members recognize and associate the concept to related experiences. Analysis via the linguistic perspective centers on consistent use, meaning, and appropriate fit in relation to context within the discipline. Lastly, the logical principle focuses on the concept's ability to maintain boundaries when integrated theoretically with related concepts. The principle-based concept analysis method offered a thorough examination of SE with consideration of explicit definitions, implied meanings, application to undergraduate education, and consistency of use within theoretical frameworks, all resulting in development of a cohesive and integrated theoretical definition (Penrod & Hupcey, 2005).

Search strategy

A cross-disciplinary, conceptually driven literature search was conducted in the databases of ERIC, PsycINFO and CINAHL. Entry of the key words student engagement and student involvement, along with the secondary terms of undergraduates and higher education launched the search process. Through an initial review of article titles and abstracts, the author identified 254 entries with emphasis on the SE concept. A cross-check for title duplication and thorough reading of abstracts for relevance to the analysis resulted in 135 articles. A manual search and ancestral review of references also allowed identification

of 13 additional articles which included four literature reviews, five theoretical articles, and four research studies.

Selection and quality appraisal

Strict inclusion and exclusion criteria were employed for thorough and specific concept analysis (Table 1). The author targeted research studies for evaluation; however, theoretical papers and reviews which addressed historical information, evidence-based findings, and hallmark features were also included because they offered clarity to the SE concept. In addition, the timeframe of 2004–2015 was instituted to provide a thorough review of past and current thought surrounding the concept.

The integrative review method delineated by Whittemore (2005) guided evaluation and selection of relevant articles. Quality scores were assigned based on the following five criteria: stated purpose of the article, an operational or conceptual definition of SE, discussion of theoretical or conceptual underpinnings, outcome measurement or evaluation of SE, and implications for teaching and learning. A priori quality score of one point was possible for each occurring criterion and articles receiving scores of 4 or higher were included in final selection. Likewise, theoretical journal entries were evaluated using Kirkevold's (1997) criteria of authenticity, methodological quality, informational value, and representativeness of primary sources. Again, presence of each criterion within an article received a one point quality score, with scores of 2 or higher included for final selection.

Completion of quality appraisal resulted in selection of 65 articles for conceptual analysis. Of this final selection, 12 were from CINAHL, 16 were from PsycINFO, and

Table 1: Inclusion and exclusion criteria.

Inclusion	Exclusion
Empirical studies that addressed SE in higher education and in undergraduate populations.	Papers that evaluated SE in primary and secondary education settings.
Literature reviews and theoretical papers featuring SE evidence-based practice; the concept's definition, attributes, and/or outcomes; theoretical frameworks underpinning the SE concept.	Studies and articles in which SE was not the central focus. Editorial work or opinion papers with little empirical evidence.
Studies that centered on SE in relation to academic practice.	Articles that focused on SE in in context of civic and political engagement or extracurricular activities
Scholarly, peer-reviewed papers published in English.	Papers published in languages other than English.
Papers published between 2004 and 2015.	Papers published before 2004 with exception of relevant historical, theoretical work.

38 were from ERIC. The global nature of student engagement became apparent as the review revealed multi-disciplinary studies from 12 different countries. In addition to researchers in the US, others have explored the concept in Australia, Canada, Colombia, Denmark, Ireland, Korea, New Zealand, South Africa, Sweden, Taiwan, and the United Kingdom. Forty-five studies were empirical with 29 based on quantitative research, 14 on qualitative inquiry, and 2 using a mixed methods design. Twenty articles provided theoretical perspective with 7 based on findings within the literature.

Findings

The four identified philosophical principles guided the literature analysis and led to discovery of conceptual components related to student engagement. Component integration resulted in development of a theoretical definition for this concept within the context of undergraduate college education, which proved relevant to nursing education.

Epistemological principle: Has the concept of student engagement been defined? Is the concept well differentiated?

Across disciplines, scholars argue for various definitions of SE and thus, cast the concept as complex and multi-dimensional (Kahu, 2011; Trowler, 2010). Much of the literature presents two major perspectives: behavioral and psychological. The latter further includes emotional and cognitive engagement.

Behavioral perspective

In his theory of student involvement, Astin presented engagement as the “physical and psychological energy that the student devotes to the academic experience” (1999, p. 518). He viewed involvement as synonymous to engagement, and emphasized behaviors of invested study time and participation in campus activities. From his standpoint, engagement assessed in a behavioral sense allowed for more direct observation and quantification than abstract psychological or emotional constructs. Likewise, other researchers have focused on behavioral elements such as class attendance, participation in discussion, and completion of homework assignments (Gerber et al., 2013; Rocca, 2010). Today, many nurse educators functionally assess SE

in similar fashion; however, this overt conceptualization tends to confuse external behavior with internal, cognitively deep learning (Meyer, 2009). The presence of behavioral markers does not guarantee short nor long-term learning, and their absence does not ensure that engaged learning has not occurred; thus, the need for both quantitative and qualitative dimensions when evaluating and defining SE.

Psychological perspective

Offering a different viewpoint, Bean (2005), contended that SE encompasses a psychological commitment that involves both cognition and emotion. Without such commitment, participation in any learning activity becomes inconsequential, and results in little change to students’ overall development. Bean proposed a model that incorporates students’ background characteristics, personality, willingness to engage, socialization within academic settings, communication with peers and faculty, and an assessment of communication. These elements influence each other and produce simultaneous feedback cycles of development and engagement.

Other scholars contributed to this idea of commitment and addressed the need for valuing and taking ownership for the learning experience (Wimpenny & Savin-Baden, 2011; Zepke & Leach, 2010). In addition, Vaccaro and Lovell (2010) disclosed overarching themes of investment as they explored learning experiences of nontraditional female students. They concluded through grounded theory analysis that the concept of self-investment represents a superior alternative to that of student engagement and argued that the added dimension of valuing oneself as well as the learning experiences are requisite components of engagement. To them, self-investment encompasses the belief “that personal growth, learning and education are needed and deserved...and includes an investment of time, energy, and funding in oneself as a deserving individual” (p. 172). Contemplation of this work reveals its applicability and utility across the spectrum of students in higher education, with particular relevance to nursing education’s population of nontraditional female students. To present self-investment as requisite to SE, however, (and thus a more comprehensive alternative) signals a conceptual challenge. Even students with severe lack of self-esteem can become highly engaged in the right circumstances, and such engagement can in turn, bolster self-esteem. Although self-investment and SE are interrelated and can reinforce one another, neither concept is logically or experientially superior or prior to the other. Self-investment provides

valuable motivation for engagement, but it is neither the same thing as, nor a replacement for, engagement.

Cognition

Csikszentmihalyi's Flow theory (1990) and Langer's construct of mindfulness (Langer & Moldoveanu, 2000) highlight cognitive components of engagement. Flow represents an individual's captivated mental state when fully occupied by interesting and thought-provoking activity. This intensified focus occurs often as students challenge themselves to exceed existing levels of performance and discover new capabilities. Mindfulness also accentuates a heightened state of involvement, but includes novel experiences which pique one's curiosity, sustain attention, and result in deep, long lasting learning. Other scholars view self-motivation as requisite to cognitive engagement, higher levels of understanding, deep learning, and mastery of challenging tasks (Fredricks, Blumenfeld, & Paris, 2004; Newmann, Wehlage, & Lamborn, 1992; Tagg, 2003). "Intrinsic motivation is a powerful indicator of when individuals will work harder, persist longer and maintain their interest in an activity longer" (Miller, Rycek, & Fritson, 2011, p. 58).

Use of interesting and engaging learning experiences perpetuates cognitive engagement, which often yields far superior student outcomes than traditional methods which focus on content presentation, memorization, and testing (Ahlfeldt, Mehta, & Sellnow, 2005; Smith & Cardaciotto, 2011; Summerlee & Murray, 2010; Umbach & Wawrzynski, 2005). In a study across academic disciplines, Laird and Kug (2005) documented that students who use information technology to complete assignments typically report higher order thinking and greater participation in student work-groups outside of class. Similarly, another research team found that when students can readily see the value of course content to their future life work, they become even more engaged (Horstamanshof & Zimitat, 2007).

A nursing research group, through review of contemporary literature, identified seven meaningful and engaging teaching strategies used by experienced educators in undergraduate classrooms (Crookes, Crookes, & Walsh, 2013). Techniques included: simulation, online technology, gaming, art, narratives, problem/context-based learning, and reflection. These authors suggested such methods, when implemented appropriately, not only increase cognitive engagement, but also create an explicit and assessable connection between classroom theory and its application to real-world clinical situations. The

identified techniques align clearly with active learning, call for transition of faculty role from content deliverer to facilitator of learning, and promote increased student self-regulation, assessment, and accountability (Weimer, 2013). Researchers globally confirm the positive impact of active learning strategies on SE (Choi & Rhee, 2014; Gebre, Saroyan, & Bracewell, 2014; Mathews, Narumon, Hiep, & Tri, 2014; Mennenga, 2013; Sun, 2013).

Emotion

A third definition of SE focuses on the affective domain and reveals a crucial link between emotion, making sense of information, and learning (Handelsman, Briggs, Sullivan, & Towler, 2005; Mazur, 2013). Specifically, students subjected to positive emotional environments exhibit mental well-being and increased memory of newly acquired information (Elder et al., 2011; Nielson & Lorber, 2009; Steele & Fullagar, 2009). Several authors examined this emotion-engagement connection qualitatively and identified important themes of resilience, perseverance, and need for belonging (Askham, 2008; Bryson & Hand, 2007; Harper & Quaye, 2009; Krause, 2005; Wimpenny & Savin-Baden, 2011).

Chambers (2010) analyzed 739 student responses and discovered undergraduates expect and highly value well-established faculty relationships. Students desire not only dialogue related to course content, but also "meaningful intervention" surrounding their learning experiences (p. 19). Other researchers revealed that when students viewed professors as people and connected with them informally, tendencies toward student self-confidence and academic success increased (Chambers & Chiang, 2012; Pineda-Baez et al., 2014.) Similarly, Mazur (2013) documented that student emotional interest served as a stronger predictor of engagement than did cognitive interest. He observed that teachers who maintained eye contact, dialogued warmly with students, and interjected personal examples sustained students' emotional and cognitive interest, even with struggles to present conceptual content clearly. Further, regardless of learning delivery modes (face-to-face, satellite broadcasting, or real-time broadcasting), all students reported higher levels of satisfaction and success when faculty exhibited personal interest, respected varying perspectives, and provided ongoing feedback (Abdous & Yen, 2011).

These findings support some of those within nursing literature, but also present significant challenges to nurse educators. For example, Greenawald (2010) recommended careful integration of student-faculty research

endeavors as a means to enhance SE. She also endorsed institutional support for increased faculty workload and the recruitment of educators from diverse backgrounds to broaden perspective and strengthen sense of community. With additional perspective, Scarbrough (2013) documented that as students transitioned through their nursing program, experiences of anger and confusion increased progressively. He suggested that resulting distrust might indirectly influence cognition and critical thinking. Likewise, in a longitudinal study of 1,334 Swedish students, another research group discovered that while active learning engagement increased throughout nursing curricula, students' emotional engagement declined (Bruce, Omne-Ponten, & Gustavsson, 2010). Similarly, Del Prato (2013) documented incidents of nurse faculty incivility and reported demeaning behaviors, unyielding expectations, and even "weeding out practices" (p. 286). She recommended more formal education and preparation for nurse faculty that emphasizes how to develop and maintain positive student-faculty relationships. Finally, Elder et al. (2011) confirmed in a qualitative study how face-to-face teaching and faculty investment of time, energy and enthusiasm supported student engagement in case study and clinically-based tutorials scenarios. All of these findings underscore need for nurse educators to continually evaluate faculty-student interactions and work toward maintaining more positive learning environments.

Epistemological conclusion

Epistemological analysis of SE reveals multiple ways of knowing the concept with a complex intertwining of behavioral, cognitive, and affective perspectives. In addition, students often gravitate from one perspective to another at any given point. (Coates, 2007; Harris, 2008). Although each perspective lends increased understanding of engagement, a well-differentiated concept remains elusive without clear conceptual borders. Further study and elucidation of SE is, therefore, indicated.

Pragmatic principle: Is the concept of student engagement applicable and useful for understanding phenomena within the discipline of nursing? Has it been operationalized?

Student engagement's utility to nursing appears quite relevant as it captures essential elements of the

teaching-learning process and offers a springboard for re-thinking traditional pedagogical methods. With lecture as a predominant teaching strategy (Di Leonardi, 2007), too many students sit passively in nursing classrooms, meet course criteria only to pass exams, and remain disengaged (Mennenga, 2013; Mulryan-Kyne, 2010). Mann (2005) and Case (2007) used the term alienation, a contrasting concept to engagement, to describe experiences of students who learn on a surface level, gain little intrinsic understanding and fail to connect with peers or faculty. The need, then, for clear identification of SE predictors and methods for measurement is warranted as nurse educators strive to develop effective teaching strategies, create welcoming learning environments and improve student outcomes.

To date, only a few nurse researchers have explored how SE relates to coursework and clinical practice. Popkess (2010), through use of the Adapted Engaged Learning Index (Schreiner & Louis, 2006), confirmed that students in active learning settings reported higher engagement than those in passive environments. In addition, students over 25 years of age, in their junior year, and with a GPA in the "A" range had significantly higher mean engagement scores than did their counterparts. Another research group found that increased hours of part-time work, whether health-related or not, negatively impacted engagement and academic success. (Salamonson et al., 2009). Still others documented positive engagement and superior academic performance as the result of peer assessment, active learning, and online virtual communities (Casey et al., 2011; Giddens, Hrabe, Carlson-Sabelli, Fogg, & North, 2012).

When compared to students of other majors (education and health-related professions), those in nursing perceive themselves as significantly more academically challenged and more engaged in rigorous coursework, but significantly less engaged in collaborative, student-centered, and interactive learning (Popkess & McDaniel, 2011). This collaborative disengagement presents a disturbing, pragmatic concern for nursing and challenges educators to further explore students' perceived barriers to engagement. Authors who have studied learning communities and their impact on belonging versus alienation offer further support to this avenue of inquiry (Case, 2007; Lightner, Bober, & Willi, 2007; Pike, Kuh, & McCormick, 2011). Herrmann (2013) suggested that with positive interdependence, students learn that the success of the group is essential for achievement of individual goals, and individual accountability removes personal temptation to loaf and leave group effort to others. Thus, cooperative learning provides a self-reinforcing

framework that promotes motivation to learn, knowledge acquisition, and application of key principles. As a teaching strategy, cooperative learning also provides for nursing education a model that can further support collaborative practice in the professional arena. It fosters students' understanding of how healthcare providers can function as different but mutually supportive members of a team. Just as the learning group shares feedback and support among its members, so also can the health care team as it meets patient needs.

Pragmatic conclusion

Although current research indicate progress in understanding SE within nursing, still, the concept is not fully operationalized and this limits its usefulness. For a discipline to consider a concept “pragmatically mature”, members must readily distinguish its key characteristics, and “it should ring true” with experience (Penrod & Hupcey, 2005, p. 405). If nurse educators hope to address deficiencies in traditional pedagogical models, they must fully appreciate the connection between instructional best practices and SE. In every way, however, this concept fits nursing phenomena.

Linguistic principle: Is the concept of student engagement used consistently and appropriately within context?

At first glance, use of SE seems consistent across the literature, but closer examination reveals multiple meanings (Bryson & Hand, 2007). Authors muddy the concept's use, sometimes referring to it as a process and, at other times, an outcome (Heller, Beil, Dam, & Haerum, 2010). Some view strategies like team-based, collaborative, and peer-assessment learning as antecedents to engagement while others refer to these factors as attributes or indicators. Kahu (2011) suggested that processes *influence* engagement whereas outcomes, such as a sense of belonging, self-regulation and dedicated effort toward learning, *constitute* engagement.

Further, within the literature scholars blur antecedents, the concept itself, and consequences. Use of problem-based learning provides a good example. It is aptly offered as a strategy to enhance SE, but one also finds that authors view it as an indicator (attribute) or even a consequence. SE, therefore, lacks a certain exactness leading to continued complexity, confusion, and a wide

range of application within various contexts. Continued variance in perspectives of behavioral, cognitive, and emotional engagement serves to propagate misinterpretation and confusion.

Logical principle: Is the concept of student engagement integrated with related concepts to formulate theory? If so, does the concept hold its boundaries (or retain clear meaning)?

Due to multiple meanings and lack of clear conceptual definition, it is not surprising that SE is not embedded within a particular theory and that it “becomes blurred when positioned theoretically with other concepts” (Penrod & Hupcey, 2005, p. 406). For example, involvement, a related concept is often used to define engagement: “The student who is ‘academically engaged’ is intellectually, socially and personally *involved* in learning that has meaningful outcomes for her” (Hockings, Cooke, Yamashita, McGinty, & Bowl, 2008, p. 192). Kuh (2009) suggested, “... *engagement* is the term usually used to represent constructs such as quality of effort and *involvement* in productive learning activities” (p. 6). Another concept, *connection*, contributes to further confusion. Case (2007) offered: “engagement can be considered to represent a connection in the context of a relationship which a student desires or expects to belong to” (p. 120). Authors present both involvement and connection as equal to or undifferentiated from engagement when, in fact, this is not the case. Students often attend classes, labs and clinical experiences regularly, sit on the front row, and even take notes. They are seemingly connected and involved, but still do not engage in learning. Harper and Quayle (2009) highlighted this distinction: “Engagement is more than involvement or participation – it requires feelings and sense-making as well as activity...it is amount plus depth, which leads to favorable outcomes” (p. 5). Thus, the lack of clear definition and conceptual boundaries hinders integration of related concepts and complete formulation of theory.

Summary of principle-based analysis

This analysis has revealed that the scientific SE literature relies heavily on implied rather than explicit meaning. Findings indicate strong potential for use of the concept within the nursing discipline (pragmatic utility), but lack

of precision and multiple definitions (epistemological principle) hamper consistency of meaning (linguistic principle) and assimilation into a theoretical framework (logical principle).

Conceptual components of student engagement

In addition to previously discussed summative conclusions, the concept analysis also revealed conceptual components related to student engagement. These include: pre-conditions (antecedents) that influence the process of SE, characteristics (attributes) which refer to the experience of SE, and outcomes (consequences) which address the effects of SE.

Pre-conditions to student engagement

Suggested preconditions of SE were categorized in the literature as those associated with students, faculty, and socio-cultural environment; however, the scope of this analysis limited discussion to student and faculty factors. Studies indicated significant impact of student contextual features culminating in the engagement process. For example, learners who believe they have personal resources to complete a task, remain self-motivated, and take ownership for their learning become more engaged (Zepke & Leach, 2010). Further, those who demonstrate traits of resilience and persistence while surmounting challenge tend to remain engaged in their studies (Wimpenny & Savin-Baden, 2011). Additionally, epistemological beliefs (what students believe about knowledge and knowing) also serve as precursors to engagement (DeBacker & Crowson, 2006). Finally, many studies have explored the antecedent influence of demographic variables and reveal mixed findings. Some indicate that mature students, those who are female, further along in their education process, and who limit part-time work report higher levels of engagement (Kahu, Stephens, Leach, & Zepke, 2013; Popkess, 2010; Salamonson et al., 2009), while others suggest entirely different conclusions (Krause, 2005; Kuh, 2009).

Faculty, their attributes, and decisions surrounding pedagogical methodology contribute contextually as well to preconditions of SE. Studies indicate the value of rigor and academic challenge in coursework highlighting problem-based learning, higher-order cognition activities, collaborative projects, and use of learning communities as

antecedents to engagement and positive learning outcomes (Ahlfeldt et al., 2005; Beachboard, Beachboard, Li, & Adkison, 2011; Bryson & Hand, 2007; Steele & Fullagar, 2009; Umbach & Wawrzynski, 2005). Further, professors who set a positive tone in their ongoing dialogue, provide student autonomy, clarify expectations and offer pertinent and timely feedback also enhance SE opportunities (Bryson & Hand, 2007; Elder et al., 2011; Steele & Fullagar, 2009).

Characteristics of student engagement

The concept of engagement places the student foremost at its core and recognizes a dynamic interplay between and among the behavioral, cognitive, and emotional perspectives. Rather than separating each of these into types of engagement as addressed previously, Kahu (2011) offered the need to view the concept holistically. She presented these perspectives as defining attributes of engagement and suggested a strategic consideration of each in light of the other. Student behaviors of active participation, devotion of time and effort to learning, as well as lively interaction with faculty and fellow students contribute to the processes of cognition and emotion. Likewise, cognitive deep learning that is active, experiential, and requires self-regulation lends support to behavior and emotion. Finally, the affective components of self-investment, a sense of belonging, and an enthusiasm for learning offer substantial backing for cognition and behavior. Kahu's (2011) depiction of this vital holistic interplay warrants attention and further exploration, but her work enhances the maturity and use of the concept of SE.

Outcomes of student engagement

Outcomes refer to the effects of SE. Bowen (2005) addressed these effects: "Engaged learners are those who complement and interpret what they learn from others with direct knowledge based on personal experience, who develop appropriately complex understandings situated in relevant contexts, and who recognize learning's moral implications and consequences" (p. 2). In addition to such learning and achievement, other researchers delineate outcomes of satisfaction, a sense of well-being, and personal development (Chambers, 2010; Kahu, 2011; Krause, 2005; Kuh, 2009). Additionally, engaged students tend to increase their coping abilities with life stressors (Alarcon, Edwards, & Menke, 2011; Bruce et al., 2010). This finding is significant for nurse educators, as nursing

students consistently report a broad range of stressors as they earn their degrees (Bruce et al., 2010). Others researchers indicated outcomes of enhanced citizenship, continued life-long learning, and career advancement (Zepke & Leach, 2010).

Theoretical definition

According to Penrod and Hupcey (2005), the power of the principle-based method of concept analysis lies in the integration of what is known as reflected by the literature at a certain point in time. Such integration should result in an assimilated definition that brings increased theoretical clarity. Therefore, based on this analysis, SE is a dynamic process marked by a positive behavioral, cognitive, and affective state exhibited in the pursuit of deep learning. This process is bound by contextual preconditions of self-investment, motivation, and a valuing of learning. Outcomes of student engagement include satisfaction, a sense of well-being, and personal development. The iterative experience of engagement occurs within a given educational framework influenced by a broader sociocultural context.

Such definition seemingly offers a well-designed fit to the theoretical models presented earlier in this analysis. For example, Astin's (1984) parsimonious theory of involvement speaks to the relationship of inputs, environments and outcomes. These concepts correspond respectively to the preconditions, characteristics and outcomes of engagement revealed in this analysis. Relational statements supported by both his model and findings in the literature emphasize the value of student inputs (preconditions) as they directly influence both environments (cognitive, behavioral and affective experiences) and outputs (outcomes). One could further surmise that educational outcomes (outputs) are not complete unless their evaluation includes information on both student inputs and experiences of the educational environment.

Building on Astin's work, Kahu (2011) emphasized the encompassing dynamic sociocultural context within which engagement occurs. Her relativist perspective seems to highlight students' unique and varied lived experiences calling for recognition of their political, social, and cultural differences when planning and implementing teaching strategies or creating environments conducive to learning. This, then, represents an added strength of Kahu's (2011) model and offers additional support for the presented theoretical definition of engagement.

Conclusion and future implications

The principle-based concept analysis method provided opportunity to study student engagement and explore its location and conceptual fit within current literature. Findings revealed antecedents, attributes and consequences, all key components of the concept. Examination of these and their interrelationships provided the possibility for a theoretical definition bringing further clarity to a complex and multifaceted concept. Such an endeavor has also raised further questions and illuminated areas of interest particularly for nurse educators as they seek to develop effective pedagogical strategies and promote active learning environments.

Clearly, meaningful learning does not occur unless students are first engaged. Recognition of the contextual preconditions influencing engagement allow nurse educators to not only identify student strengths and challenges, but also to structure class content in creative ways that better promote critical thinking, problem solving and decision making. Additionally, the affective, cognitive, and behavioral attributes of SE offer faculty an organizing framework for developing effective coursework and maintaining positive student interaction. In classroom, laboratory, and clinical settings, students must embrace situational content that to them is meaningful, focuses their attention, and calls for some level of active participation. Finally, the nursing discipline must view engagement as a dynamic continuum best explored not only through survey measurement as is the current and predominant mode of inquiry, but also through in-depth qualitative work. Given nursing's profound appreciation for the individual's lived experience and varying perspectives, the discipline is well-poised to participate in such inquiry. Kahu's (2011) conceptual framework of SE provides a model well suited to guide this exploration as it illuminates the many aspects and components of this complex concept.

Questions requiring further exploration include what are student and faculty perceptions regarding engagement? Do their perceptions mirror each other or do they differ? What are clear identifiers of engagement and do they offer valid criteria for measurement? What ways can nurse educators best promote and maintain engagement? Such questions represent the tip of the iceberg when considering this important concept, particularly in relation to nursing education. Although much engagement research and commentary exists across disciplines, this concept analysis revealed relatively few studies (ten) within the nursing discipline; therefore, answers to

these and many other questions require continued investigation in order to bring clarity to the concept and yield positive gain for curricular reform in baccalaureate nursing education.

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