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Analyzing profiles, predictors, and consequences of student engagement dispositions

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ABSTRACT

Drawing from a nationally representative sample of 12,760 students attending public high schools in the United States, this study used latent class analysis (LCA) to analyze profiles, predictors, and consequences of student engagement dispositions. A student engagement disposition is an umbrella concept. It encompasses students' identification with school together with their academic competencies and overall educational aspirations. Six subpopulation profiles of engagement dispositions were culled from the data using LCA. These profiles included students who possessed "model student" attributes as well as others whose school experiences reflected ambivalence and disidentification. Where practice and policy are concerned, findings regarding the characteristics and consequences of each profile can be used by researchers, practitioners, and policy makers to facilitate tailored intervention planning as well as more nuanced policy development.
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1. Introduction

Student engagement is an essential component of academic learning, achievement, high school graduation, and postsecondary enrollment and completion (e.g., Christenson, Reschly, & Wylie, 2012; Finn & Zimmer, 2012; Rumberger & Rotermund, 2012). Although recent research has significantly advanced the understanding of engagement (e.g., Christenson et al., 2012), important work remains. For example, most research conceptualizes engagement as a multi-dimensional construct consisting of cognitive, affective, and behavioral dimensions. However, most quantitative studies employ only one such dimension in their analytic models (Betts, 2012; Fredricks, Blumenfeld, & Paris, 2004). Moreover, although qualitative research has shown that students engage in school for different reasons (Crick, 2012), and in different ways (Eckert, 1989), most quantitative studies examine engagement using statistical tools that are ill-equipped to capture this diversity (Feinstein & Peck, 2008).

The purpose of the present study was to address these research needs by offering an integrative, data-driven, and person-centered framework for student engagement research. This framework utilizes latent class analysis (LCA) to model subpopulation profiles of what we are calling "student engagement dispositions." A student engagement disposition is a categorical construct. In our framework, it helps to characterize different kinds of cognitive and affective engagement in school. These different kinds of engagement are explored in this study using indicators of students' academic competence, affective school attachments, and educational aspirations (Finn, 1989; Lawson & Lawson, 2013).

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When these indicators are modeled conjointly using LCA, several distinct, subpopulation profiles of student engagement dispositions emerge from the data. The practical import of this subpopulation profile view, perhaps obvious, needs to be emphasized. School psychologists and other school professionals can develop tailor-made interventions once each subpopulation's special engagement-relevant characteristics are identified and evaluated.

In addition to offering a data-driven view of student engagement dispositions, the article features results from two related statistical analyses. First, we provide preliminary information about the social–demographic characteristics associated with each engagement disposition profile group. This information provides important information for engagement-oriented intervention planning and more nuanced policy development. Second, we evaluate the predictive validity of our disposition profiles by analyzing their relationship to students' on-time high school graduation and enrollment in postsecondary educational institutions. These analyses provide researchers, practitioners, and policy makers with important insights into the engagement-related competencies and characteristics that are the most adaptive for long-term educational success.

1.1. Literature review

To date, most educational research has conceptualized student engagement as a "meta-construct" consisting of behavioral, emotional, and cognitive dimensions (see Appleton, Christenson, & Furlong, 2008; Finn & Zimmer, 2012; Reeve, 2012 for exceptions and additions). In this frame, *behavioral engagement* refers to student participation, positive classroom conduct, and compliance with school rules (Finn & Zimmer, 2012; Griffiths, Lilles, Furlong, & Sidhwa, 2012; Rumberger & Rotermund, 2012). *Emotional engagement* refers to student feelings of identification and belonging to school, as well as their affective attachments to academic activities, such as the level of interest, enjoyment, happiness, boredom, or anxiety that they experience while conducting academic work (Appleton et al., 2008; Pekrun & Linnenbrink-Garcia, 2012; Skinner, Furrer, Marchand, & Kindermann, 2008). *Cognitive engagement* refers to students' psychological investments in learning (Fredricks et al., 2004), the cognitive effort they exert while completing academic tasks (Finn & Zimmer, 2012) as well as the extent to which they persist when academic work becomes difficult (Corno, 1993).

Although this conventional framework has been widely used to describe engagement research (e.g., Galla et al., 2014; Wang & Eccles, 2012), its generic form does not capture the complexity of today's engagement research agenda. This complexity is particularly pronounced in the recently published handbook on student engagement research (Christenson et al., 2012). This 800-page volume is replete with chapters that highlight the diverse and sometimes conflicting perspectives that define the current research conversation.

In light of the challenges posed by this diversity, the following review was organized to underpin a particular view of engagement and engagement dispositions. In rendering this review, we recognize that not all researchers will agree with our preferred categorization of engagement research and theory. However, given the current status of engagement research, consensus may not be possible at this time (e.g., Lawson & Lawson, 2013).

1.1.1. Engagement as a quality of experience

The first identifiable line of engagement research can be located in the motivation literature. Although studies included in this line of work are diverse in design and theoretical orientation (e.g., Reeve, 2012; Shernoff, 2013), they can be loosely grouped together based on a shared operational view of engagement. This operational view depicts engagement as an "in the moment" experience—the quality of which varies for students as they participate in discrete school activities and events (Davis & McPartland, 2012; Shernoff, 2013). Research suggests that these experiences can range from all-encompassing "flow states" (Csikszentmihalyi, 1999) to more sub-optimal feelings of disaffection, alienation, and social withdrawal (Shernoff, 2013).

Beyond these basic definitions, scholars typically evaluate students' "engagement states" relative to two important factors: motivation and context (e.g., Skinner & Pitzer, 2012). In this framework, *motivation* is typically operationalized using indicators of students' *school belonging* or self-assessed *competency beliefs* (e.g., Assor, 2012). *Context* is then measured according to those factors which are thought to enhance student motivation, such as instructional practices that promote student needs for autonomy, competence, and relatedness (e.g. Reeve, 2012). These variables are then typically arranged by researchers to depict a particular sequence of events, such as context → motivation → engagement → outcome.

Although motivational researchers sometimes disagree about which aspects of context and motivation are the most important for engagement (Eccles & Wang, 2012), their work is often bound by four key theoretical assumptions. The first assumption is that engagement is malleable (i.e., it is amenable to improvement via pedagogy and other interventions). The second is that engagement and motivation should be treated as conceptually and analytically distinct constructs (Eccles & Wang, 2012). The third is that the quality of engagement depends on student motivations to act and learn (Skinner & Pitzer, 2012). And the fourth is that motivation and engagement are often context dependent. Overall, this line of research indicates that when students' motivational needs are met by the surrounding environment, they can and will engage constructively in classroom activities (Reeve, 2012). When they are not, students may emotionally, cognitively, and behaviorally withdraw from school (Skinner et al., 2008).

1.1.2. Engagement as a set of characteristic features

A second identifiable line of research frames engagement as a "meta-construct" consisting of behavioral, cognitive, and affective elements (e.g., Reschly & Christenson, 2012). In this research frame, scholars extend the operational view of engagement beyond students' "in the moment experiences" to include analyses of the cognitive, affective, and behavioral *characteristics* that facilitate their academic learning and overall school success. Examples of the constructs used to capture these student-level features include behavioral measures like *student attendance* (e.g., Appleton, Christenson, Kim, & Reschly, 2006), cognitive–behavioral measures such as *student persistence* (Martin, 2007) as well as affective measures such as *school belonging and identification* (Voelkl, 2012).