

Relationships: The Key to Student Engagement

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Abstract

The purpose of this study was to determine any variances existing between high school students, middle school students, and upper elementary students among the 3 components of student engagement—emotional, cognitive, and behavioral. In addition, the researcher wanted to verify any differences existing between high school teachers, middle school teachers, and upper elementary teachers among the 3 components of student engagement—emotional, cognitive, and behavioral. The goal was to clarify how students and teachers value the 3 components of engagement. Findings from the student respondents reveal significant differences between 2 of the 3 primary components of student engagement: emotional and cognitive. However, results indicate there was no statistical difference in the behavioral component among the 3 school levels. In contrast, findings from the teacher cohorts differed significantly among behavior engagement and emotional engagement with no significant differences among cognitive engagement. Therefore, results reveal an alarming dissimilarity between the student and teacher respondents on how the 3 components of student engagement are valued.

Key Words: *student engagement, cognitive, behavioral, emotional, relationships*

1. Introduction

One of the most important issues facing educators today is student engagement. Without engagement, students tend to not only withdraw emotionally and cognitively from the learning process, but also physically take themselves away from the school setting altogether. The costs for this withdrawal are considerably high for both the student and society in many forms, including the lack of productive citizenship. Even worse, dropouts are at risk of unemployment and incarceration, placing additional burdens upon themselves and society [1]. However, most solutions to the dropout problem support punishments such as revoking a driving license rather than incentives for students to remain in school [2]. The educational system has focused on many interventions to prevent students from leaving school. Many are well intended, but few are based at the beginning of a student's educational career as a preventative measure when the process to withdraw from school may have begun as early as elementary school [3].

High schools in the United States have been described as having reached crisis level, in terms of retention and graduation rates [4]. The high school dropout rate is a “long term process of disengagement that occurs over time and begins in the earliest grades” [5]. Too many students are inattentive or disruptive in the classroom, do not participate in the curriculum, and experience low levels of motivation and interest leading to the “emotional and physical withdrawal of students from school” [1]. Students remaining engaged in the learning process are at less risk of dropping out of school; however, school disengagement continues to be a major factor within the educational setting, which is suggested as an “engagement gap” among students [2]. While previous research reveals numerous studies based on engagement at the college level, additional research is still needed among students of K-12 schools [6]. Engagement offers several benefits and is essential to “diminishing student apathy and enhance learning” [7]. If educators have a

better understanding of student engagement, and at what point students become disengaged, teachers may be able to implement specific strategies and instructional practices to enhance student engagement. Therefore, by keeping students engaged in the learning process, student achievement may increase while the “engagement gap” closes and may provide a possible intervention against the high school dropout rate [2].

Disengagement is a potential risk to all students, not just those of a minority or low socioeconomic status. To gain a deeper understanding of student engagement, the framework of this study is guided by the following research questions:

1. Do differences exist between high school students, middle school students, and upper elementary students in the three components of student engagement—cognitive, behavioral, and emotional?
2. Do differences exist between high school teachers, middle school teachers, and upper elementary teachers in the three components of student engagement—cognitive, behavioral, and emotional?

2. Literature Review

Student engagement is described from various definitions found within the research. For example, conceptualized engagement as “a magnet that attracts learner’s meandering attention and holds it . . . It means the learner has ‘wrapped around’ an important idea, has incorporated it accurately into his or her inventory of how things work. The learner owns the idea” [8].

In addition, the term *engagement* has been used synonymously with words such as active, attentive, interest, motivation, and effort [9]. However, Ainley, Frydenberg, and Russell [10] point out a difference between motivation and engagement. “Motivation is about energy and direction, the reasons for behavior, why we do what we do. Engagement describes energy in action; the connection between person and activity”.

In the National Survey of Student Engagement [11], engagement is defined as “the intersection of the time and energy students devote to educationally sound activities”. Engagement in behavioral terms is considered the willingness to complete required assignments, attending class, and participation in school activities [12].

Furthermore, a description for engagement is offered by Skinner, Kindermann and Furrer [13], “At its most general, engagement refers to the quality of a student’s connection or involvement with the endeavor of schooling and hence with the people, activities, goals, values, and place that compose”. Finn [14] stressed the connection of engagement with his “participation-identification model” highlighting the importance of students “bonding” with school; “if bonding does not occur, the likelihood of behavior problems, including leaving school before graduation is increased”. Students’ active participation in school and classroom activities and a concomitant feeling of identification with school” are positive engagement indicators [14]. Likewise, Skalsky [6] added unlike socioeconomic status and IQ, educators can provide a positive influence toward increasing student engagement.

2.1 Components of Engagement

The inventory of definitions for the term engagement are plentiful and found throughout the literature; however, for the purpose of this research project, the comprehensive definition offered [7] provided an explanation incorporating the three components of engagement: behavioral, cognitive, and emotional:

Behavioral engagement draws on the idea of participation; it includes involvement in academic and social or extracurricular activities and is considered crucial for achieving positive academic outcomes and preventing dropping out. *Emotional engagement* encompasses positive and negative

reactions to teachers, classmates, academics, and school and is presumed to create ties to an institution and influence willingness to do the work. Finally, *cognitive engagement* draws on the idea of investment: it incorporates thoughtfulness and willingness to exert the effort necessary to comprehend complex ideas and master difficult skills. [7]

Even though the definition clearly divides the components of engagement, there is no implication to suggest a definitive separation and continue to clarify, “These factors are dynamically interrelated . . . they are not isolated processes” [7]. Even though each component of engagement has its own specific definition; they are interdependent and cannot be entirely separate. For instance, when students are excited about learning they are considered emotionally engaged, and they are more likely to implement effective learning strategies, thus becoming cognitively engaged. Each component shares overlapping concepts [10]. Engagement is a multicomponent concept that can be separated, but also remains intersected in a profound way [7].

2.1.1. Behavioral Engagement: Behavioral engagement is defined as a complex construct divided into three categories of school participation: (a) positive conduct, (b) involvement in learning and academic tasks, and (c) participation in school-related activities. For example, positive conduct includes obeying school rules, attending class regularly, adhering to norms and avoiding disruptive behaviors [7, 10, 12, 15-16]. Furthermore, involvement in learning and academic tasks includes effort, persistence, attention, class participation, asking questions, and conversing with the teacher and other students [7, 10, 12, 15-17]. In addition, participation in school-related or extracurricular activities may include clubs, sports, or school governance [10, 12, 15-16].

Behavioral engagement captures the ways in which students interact within the school setting through academic and nonacademic activities to be thought of as “engagement in the life of the school” [2]. Students actively responding to learning tasks by asking relevant questions, working to solve task-related problems, and participating in relevant discussions with peers and teachers are prime examples of students behaviorally engaged [12]. Student attendance rates at school are a key factor in behavioral engagement and “highly predictive of non-school completion” [18]. Students must identify with school and take a personal interest in learning. Students who are behaviorally engaged identify themselves with school, will attend school regularly, and arrive to school on [14, 16, 30].

Data from a longitudinal sample of 526 high school students across the United States and examined how these students spent their time in high school and the various conditions in which students described being engaged. “Participants experienced increased engagement when the perceived challenge of the task and their own skills were high and in balance, the instruction was relevant, and the learning environment was under their control”. However, the results also indicated students spent one-third of their class time in an inactive state of learning such as listening to a lecture or watching a video and half of class time was spent on somewhat challenging independent work; furthermore, only 14% of class time was spent in class discussions and group activities [19]. High behavioral engagement is based on the quality of classroom experiences. Students reported whole group instruction “as relatively teacher-controlled, whereas small group and individual instruction are perceived as relatively student-controlled” [20]. Active learning encourages critical thinking, self-directed learning, and provide students multiple opportunities to self-assess and revise their own thinking processes to better problem solve [21].

Active learning techniques encourage engagement by holding students accountable for involvement through specific question and response techniques, cooperative learning groups, and partner discussion, which empowers students to move from passive learning into active learning [22]. Cooperative learning groups provide a more comfortable

atmosphere for student discussion and allow students an opportunity to ask questions in a more controlled setting, empowering students to remain engaged within the learning process. Student engagement necessitates active learning. If students are not engaged in the learning process, every minute spent on instruction, data collection and analysis, and professional development will not motivate students to learn [23]. Dewey [24] proposed the value of personal experience in learning forms a reciprocal relationship between thinking and doing. His work laid the foundation for future researchers. For example, students partake in conscious learning based on the activity theory. The foundation of the activity theory is defined by “the phenomenon that unifies attention, intention, memory, reasoning, and speech”. In other words the “activity theory focuses on the purposeful actions that are realized through conscious intentions. [The] activity theory claims that learning and doing are inseparable and that they are initiated by intention” [25].

Furthermore, the correlation results of teacher behavior and student engagement from a study conducted to investigate the reciprocal relationship between student and teacher. The measures include teacher involvement, structure, and autonomy support. “These relations were positive, indicating that children who were more behaviorally engaged subsequently received more contextual support . . . [and] strong empirical support was found for a reciprocal relationship between teachers’ behavior and student’s engagement in the classroom” [17].

2.1.2. Emotional Engagement: Additionally, the reciprocal relationship encourages emotional engagement through the student’s perceptions of teachers’ behavior and is directly supported through teachers’ actual behavior among students. “When children experience teachers as warm and affectionate [and] providing clear expectations, children feel happier and more enthusiastic in class” leading to building an emotional rapport between students and teachers. Emotions are a key component of student engagement and refer to students’ affective reactions in the classroom such as happiness, interest, boredom, anxiety, frustration, and sadness [7, 10, 17, 26]. Students exhibit emotional engagement when they employ positive or negative emotional responses to learning activities [17]. Furthermore, Herreid, Terry, Lemons, Armstrong, Brickman, and Ribbens [27] indicated their study revealed significant correlations among emotion, engagement, and learning gains. Teachers prefer students “to experience positive and pleasant emotions with the hope that these emotions will foster motivation, engagement, and learning” [28]. “Teachers know that engaged students are usually happier than disconnected ones who have isolated tasks to do, and research confirms that engagement activates more of the pleasure structures in the brain than do tasks of simple memorization” [29].

In addition to emotional responses, some conceptualize emotional engagement as a feeling of investment and identification. Identification is a sense of belonging, feeling an important part of the school body, and finding value in the school experience. “According to this perspective, the person comes to identify with a place or activity structure that may represent certain expectations, values, beliefs, and practices [14, 30]. However, Fredricks *et al.*, [7] argued identification is usually “general and not differentiated by domain or activity. For instance, it may not be clear whether students’ positive emotions are directed toward academic content, their friends, or the teacher”. Identification is likely to occur over time when students are active participants during classroom and school-wide activities and when students receive praise, rewards, and acknowledgement. “An internalized sense of identification can, in turn, serve to perpetuate the student’s active participation in class and school” [31]. Teachers can influence emotional engagement by appreciating the strengths, culture, and life experiences of their students. Yazzie-Mintz [2] (2006) included,

Emotional engagement emphasizes students’ feelings of connection or disconnection of their school—how students feel about school, the ways and

workings of the school, and the people within their school . . . this component can be described as engagement of the heart.

The idea is reflected when a researcher observed a group of students taking an indirect route back to class to pass by a particular teacher standing at the doorway greeting students. The students took a longer route just for the purpose of receiving a moment of personal attention. Students look for a connection with an adult or peer, express a desire for engagement through relationship, and want to be acknowledged as an important part of their school community [29]. Emotional engagement can fluctuate based on the flow theory. He explains the flow experience occurs when challenges are balanced, neither too difficult nor too easy [19]. According to Fredricks *et al.*, [7], “Flow is a subjective state of complete involvement, whereby individuals are so involved in an activity that they lose awareness of time and space. The definition of flow provides a conceptualization that represents high emotional involvement or investment”. “Emotion and attention, [is] the gateway to cognition” [32].

2.1.3. Cognitive Engagement: Cognitive engagement is a primary factor in how students go about completing instructional related activities [2]. “Lessons that are not engaging let students’ minds wander. They fail to make the case for relevance because they don’t connect them to what is important in their lives” [33]. Based on cognitive and constructivist ideas, making learning relevant and scaffolding learners to a higher intensity of thinking, students are more likely to adapt their learning to predictable and unpredictable situations keeping students consciously thinking and engaged throughout the learning experience therefore improving their behavioral engagement[34-35]. Using strategies based on the theories of Piaget [36] and Vygotsky [37], students who are held to a higher accountability of rigorous learning require support through engagement activities. It is important to identify the levels of interest and attitudes described as affective criteria. As cognitive growth occurs, students are capable of engagement for longer periods [12]. Cognitive engagement can range from simple memorization to the use of self-regulating or strategic learning strategies that promote deep understanding and expertise [7]. Cognitive engagement can also be described as “engagement of the mind” [12]. “Cognitive control, the ability to coordinate thoughts and actions in relations with internal goals, is often required in our everyday life and sub serves higher processes such as planning and reasoning”. In addition, engagement includes cognitive criteria “to which students are attending to and expending mental effort in the learning” [38]. Cleeremans and Jimenez [39] defined learning as “a set of phylogenetically advanced adaptation processes that critically depend on an evolved sensitivity to subjective experience so as to enable agents to afford flexible control over their actions in complex, unpredictable environments”. Shanks and St. John (as cited in [38] stated, “Human learning is almost invariably accompanied by conscious awareness”. We concluded that a significant difference between adaptation and learning is whether or not consciousness is involved” [38].

3. Methodology

This research project took place within one city school district consisting of 11 elementary schools, 4 middle schools, 2 high schools and a technology center. At the beginning of the project, the total student enrollment within the district was 9,296 students and 523 certified teachers. The research participants were obtained through schools with similar demographics of low socioeconomics within the city school district. Neither students nor teachers were linked to any particular school within the district. However, the participants’ school level—high, middle, or upper elementary—was considered a targeted characteristic for this study. Enrollment is considerably lower at individual elementary

schools since there are so many more elementary schools than middle and high schools located within the district. A total of 585 consent forms were sent home to parents and guardians inviting and requesting student participation. A total of 181 consent forms, approximately 31%, were returned. Of that 31%, 42 parents or guardians of the upper elementary students refused participation of their child. All of the 109 students who were granted parental permission were provided assent forms. After the assent forms were explained to the students, 11 students declined to participate and 5 were absent on the date of the survey. A total of 93 respondents or approximately 16% of the 585 students invited participated in the research study—31 students in each school level. A total of 104 surveys were sent out electronically to certified teachers requesting participation. A total of 28 responses or approximately 27% were returned completed.

3.1 Quantitative Instrumentation

The National Survey for School Engagement was developed by the National Center for School Engagement [11] to gain a better understanding of how students relate to school experiences, their attitude toward school, and how to keep students interested in school and the learning process. The survey contained 15 items related to the three components of engagement: cognitive, behavioral, and emotional. This design is cross-sectional allowing for quantitative data collection at one point in time for the comparison of students' engagement levels and was administered only once. Permission to use the survey for this study was granted. All items were measured on a 1 to 5 Likert-type scale using two separate scales. The first scale was ranked (1) *Strongly Agree*; (2) *Agree*; (3) *Neutral*; (4) *Disagree*; and (5) *Strongly Disagree*. The second scale was ranked (1) *Never/Almost Never*; (2) *Rarely*; (3) *Sometimes*; (4) *Often*; and (5) *Always/Almost Always*. A behavioral example from this survey is "I come to class prepared." A cognitive example from this survey is "I am interested in the work I get to do in my classes." An emotional example from this survey is "I enjoy the work I do in class." Cronbach's alpha reliability tests were run on behavioral, cognitive, and emotional engagement. All showed a relatively high level of reliability based on the Cronbach's alpha test with an exception of the behavioral engagement at .617. The reliability for the overall survey was .856, .759 for cognitive engagement, and the Cronbach's reliability for emotional engagement was .793.

The Teachers' Perception of Student Engagement survey was adapted by the researcher from the National Survey for School Engagement geared toward a teacher's perspective. All items were measured on a 1 to 5 Likert-type scale using two separate scales. The first scale was ranked (1) *Strongly Agree*; (2) *Agree*; (3) *Neutral*; (4) *Disagree*; and (5) *Strongly Disagree*. The second scale was ranked (1) *Never/Almost Never*; (2) *Rarely*; (3) *Sometimes*; (4) *Often*; and (5) *Always/Almost Always*. The questions were of the same nature as the student survey, but slightly modified for the teacher respondent. The overall Cronbach's alpha showed a high level of reliability at .910. In addition, respondents were asked to rank the three components of engagement with 1 as the most important and 3 as the least important.

4. Research Results

The first question of this study was to determine if any differences exist among high school students, middle school students, and upper elementary students in the three components of student engagement—cognitive, behavioral, and emotional. A one-way ANOVA was used to analyze students' scores among the three components of engagement. The cohorts differed significantly among cognitive engagement, $F(2, 90) = 2.521$, $p = .002$ and emotional engagement, $F(2, 90) = 6.346$, $p = .003$. However, there was no significant difference in behavioral engagement, $F(2, 90) = 2.576$, $p = .082$.

To determine how the means differed, a Tukey honestly significant difference (HSD) post-hoc test was run for evaluation of significant differences. Tukey HSD post-hoc comparisons of the three levels among the emotional engagement group indicated a significant difference between the high school level ($M = 14.94$, [13.51, 16.36], $p = .717$) and the elementary level ($M = 18.74$, [17.24, 20.24]), $p = .003$. In addition, the middle school level ($M = 15.81$, [13.92, 17.69], $p = .027$) indicated a significant difference between the elementary level ($M = 18.74$, [17.24, 20.24]), $p = .003$. The Tukey HSD post-hoc comparisons among the cognitive engagement group indicated a significant difference between the high school level ($M = 14.68$, [13.30, 16.05], $p = .052$) and the elementary level ($M = 18.00$, [16.67, 19.33], $p = .002$).

Mean significant differences existed between high school, middle, and upper elementary students among two of the three primary components of student engagement—cognitive and emotional. The high school participants and middle school participants rated emotional engagement significantly lower than elementary participants. There was no significant difference between the ratings of high school students and middle school students in the emotional engagement group. However, only high school participants rated cognitive engagement significantly lower than elementary participants. Furthermore, there was no significant difference between the ratings of high school participants and middle school participants and no significant difference between middle school participants and elementary participants within the cognitive category.

The second question of this study was to determine if differences exist between high school teachers, middle school teachers, and upper elementary teachers in the three primary components of student engagement—behavioral, cognitive, and emotional. A MANOVA was used to analyze students' scores among the three components of engagement. The cohorts differed significantly among behavior engagement, $F(2, 26) = 2.37$, $p = .025$ and emotional engagement, $F(2, 26) = 3.44$, $p = .004$. However, there was no significant difference in cognitive engagement, $F(2, 26) = 0.037$, $p = .936$.

To determine how the means differed, a Least Significant Difference (LSD) post-hoc test was run for evaluation of significant differences. The LSD post-hoc comparisons of the three levels among emotional engagement group indicated a significant difference between the middle school level ($M = 3.20$, $p = .027$) and the elementary level ($M = 3.44$, $p = .027$). In addition, a significant difference was found between the middle school level ($M = 3.20$, $p = .027$) and the high school level ($M = 2.92$, $p = .001$). Furthermore, the LSD post-hoc comparisons among the behavior engagement group indicated a significant difference between the high school level ($M = 2.92$, $p = .018$), the elementary level ($M = 3.44$, $p = .018$) and the middle school level ($M = 3.20$, $p = .018$).

5. Conclusions and Limitations

One of the top six reasons students drop out of school is not getting along with their teachers [40]. This disconnect may be the result of negative emotional engagement or a lack of positive emotional engagement. The results of this study revealed high school participants and middle school participants rated their own emotional engagement within school significantly lower than the elementary participants. Engagement is about the relationships students develop within a school community such as teachers, other adults within the educational setting, and with peers. The degree of emotional engagement depends on the quality, affiliation, and depth of the relationships. The difference may be due to a positive personal connection the upper level elementary students have developed with their teachers over a longer period of time. Upper elementary participants are many times in a self-contained classroom. Self-contained means the students keep the same teacher for all core subjects. The students have other teachers for physical education, computer lab, and library classes, but the majority of each school day is spent with the same teacher and peers, allowing for more time to build personal and emotional

relationships between students and the classroom teacher. However, the middle school and high school participants change classes and have multiple teachers for core subjects. Less time is spent with each teacher on a daily basis, therefore, limiting the opportunity to build the emotional relationships. Based on the student participants' responses, students at each of the three school levels may desire a positive emotional bond with their teachers. "It is the attachment and identification with a meaningful adult that motivates or reinforces a child's desire to learn" [41].

In many cases teachers' behaviors may hinder the emotional relationship between the student and teacher without the teachers' awareness or intention [42]. Interestingly, the teachers surveyed in this study reported more importance on the behavioral engagement component compared to the emotional engagement component. High school teachers ranked behavioral engagement as most important, then cognitive engagement, and emotional engagement as least important. Middle school teachers ranked emotional engagement as most important, then cognitive engagement, and behavioral engagement as least important. Finally, upper elementary teachers ranked cognitive engagement as most important, then behavioral engagement second, and emotional engagement as least important. Based on the results of this research, there is a distressing disconnection between students and upper elementary and high school teachers regarding the importance and value of each engagement component. However, the middle school teachers reported their perceptions as most in common with students ranking emotional engagement as most important and valued.

The intersection of behavioral and emotional components within student engagement is based on the high quality of classroom experiences. Engaged students maintain behavioral involvement within the school setting supplemented by a positive emotional climate. Based on the survey results, teachers may need to focus more on the positive relationships with students and hopefully the behavioral engagement will then become more evident in the classroom and school setting.

The limitations of this study address the restrictions that may have improved this study in some way. If a similar study is investigated, it may be beneficial to include some of the following suggestions:

- The survey instruments were administered in the late fall and early spring. Therefore, it would have been interesting to have administered the survey at the end of the school term to see if differences exist throughout the school year.
- Students were asked to rate their engagement, but did not address why they are, or why they are not, behaviorally, cognitively, and emotionally engaged in their learning environment. The "why" or "why not" would have been helpful in addressing engagement concerns.
- It may have been helpful to have expanded the study to include early childhood students to gain insight on the perceptions of the youngest school age students.
- It may have been helpful to have included participants from other school districts found in and out of the state to increase reliability.

6. Recommendations

For many reasons, scholars may continue to explore their own topic of relevance or at least connect research ideas to other areas of interest. In addition, other researchers may choose to investigate the topic from a different point of focus. The researcher of this study chose to share a few suggestions for future research.

- There is a need for participant observations that focus on student engagement in each school level.
- There is a need for a longitudinal study that focuses on student engagement in each school level.

- It would be helpful to include private schools in future research on student engagement.

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