The role of parent, classmate, and teacher support in student engagement: Evidence from Ghana

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ARTICLE INFO

ABSTRACT

The literature is unequivocal about the importance of improving academic engagement in addressing challenges such as school drop out or increasing student motivation. What is less certain, particularly in the literature from developing countries, is how social support systems (parents, teachers, and classmates) influence students' emotional and behavioral engagement. Drawing from the ecological perspective, this study analyzes data from Ghana using structural equation modeling to examine mediated and unmediated pathways through which parent, teacher, and classmate support affect students' emotional and behavioral engagement. Findings suggest classmate support has the strongest association with student engagement, followed by parental support. Teacher support is neither a mediator nor a direct predictor of student engagement. These findings have implications for teacher training and professional development, especially training on how to actively involve parents in motivating their children to be engaged scholars.

Many scholars have focused on improving students' academic engagement as a critical pathway toward educational success as well as improving the quality of education (Coates, 2010; Christenson et al., 2012). Efforts to increase student engagement can be traced back to the mid-1980s and throughout the 1990s, when the National Survey of Student Engagement was instituted in the United States, and later modified for other Western contexts (Trowler and Trowler, 2010). Since those early efforts, the field has made significant empirical strides to identify the protective role of student engagement when addressing challenges such as school drop out and risky behaviors (Archambault et al., 2009; Wang and Fredricks, 2014). The body of research on engagement has abundantly highlighted the role student engagement plays in facilitating student motivation, content retention, school adjustment, academic achievement, and behavior within school environments (Andrews and Duncan, 1997; Barber and Olsen, 2003; Guo et al., 2014; Li and Lerner, 2011; McCoy et al., 2013; Wang and Peck, 2013; Aunola et al., 2000).

Despite the vast literature on student engagement, existing gaps in this literature has hampered the translation of research evidence into practice in resource-limited countries, especially sub-Saharan Africa. First, although research on education in sub-Saharan Africa has advanced on some indicators (e.g., school enrollment, attendance, and academic performance), research focused on student academic engagement has received limited attention; thus, little is known about the full nature of student engagement. Neither does the field have a good sense of how best to track student engagement in resource-limited contexts. Moreover, although clarity of the conceptualization, dimensionality, and psychometric properties of the engagement construct is considered "a prerequisite to advance the emerging construct of student engagement and its usefulness in interventions and school programs" (Christenson et al., 2012, p. vii), research has not addressed the lack of clarity of the student engagement construct in resource-limited contexts. This study aimed to help fill this gap by using data from junior high school students in Ghana to test and validate the factor structure of the student engagement construct.

In school intervention research, engagement is an important malleable factor, as Christenson et al. (2012) noted: "Engagement is an alterable state of being that is highly influenced by the capacity of school, family, and peers to provide consistent expectations and supports for learning" (pp. v–vi). In their study of student-teacher relationship in the United States, Woolley et al. (2009) found that teacher support mediated the effect of classmate and parental support on student behavior. In addition, the U.S.-based High School Study of Student Engagement, conducted with more than 40,000 students in 103 high schools across 27 different states, reported that students identified teacher support as critical to student engagement (Yazzie-Mintz and

McCormick, 2012). However, the pathways through which social contexts (i.e., parent, classmate, and teacher support) affect different dimensions of student engagement remains unclear in the student engagement scholarship from sub-Saharan Africa because existing studies have not adequately explored these relationships.

An important question for education stakeholders in developing countries is, "How do these mediated relationships among support systems and student engagement reflect the contextual nuances in non-Western setting?" Because most of the research has been U.S.-based, it is unclear whether the hypothesized mediated pathway holds in resource-limited settings given the differences in educational infrastructure and resources such as classroom technology, human resource capacity, and household economic conditions. For example, in resource-limited settings such as Ghana, stakeholders have substantial concerns that student-teacher engagement is hampered because of the lack of proper teacher training on how to engage students (Ampiah and Adu-Yeboah, 2009). Due to poor training, teachers rely on the "banking model" of education where students are expected to exercise rote memorization without questioning the source of the information (Freire, 2005). In addition, it is unclear if teacher support has similar effects in the sub-Saharan African context as it does in Western contexts (Woolley et al., 2009), and if so, the extent to which teacher support mediates the effects of classmate and parent support on student engagement. This study sought to address these unanswered questions about the potential pathways by which classmate, parent, and teacher support affect various dimensions of student engagement.

1. Student engagement

Although student engagement scholars have unanimously supported the multidimensional nature of that construct, no consensus exists on the number of subconstructs. In the majority of studies, the student engagement construct has between two and four subconstructs (i.e., emotional, behavioral, cognitive, and academic). The present study focused on the subconstructs of emotional and behavioral engagement as described by Fredricks et al. (2004). These two subtypes of student engagement have been the most studied and are considered as benchmarks for evaluating the success of the other forms of engagement (Reschly and Christenson, 2012). In this study, student engagement is defined as students' emotional and behavioral response to schooling activities and participation in learning activities (Fredricks et al., 2004).

In the school environment, emotional engagement taps into students' feelings about their school activities and the extent to which they value academic work. Emotional engagement is usually internal, and thus difficult to observe; a student's emotional engagement can manifest in the form of fears and anxieties or in the form of enthusiasm about schoolwork and interactions with teachers, peers, and the school (Reschly and Christenson, 2012). However, given both the predominant social norm of adult control and expected show of obedience and respect for adults within some Ghanaian families (Twum-Danso, 2010), teachers and parents might be unable to observe some students' emotional engagement. In contrast, classmates might be able to observe fellow students' emotional engagement because they provide emotional bonds that allow each other to freely share their successes, fears, and worries about school (Pekrun and Linnenbrink-Garcia, 2012).

Behavioral engagement refers to students' learning and participation in academic tasks. Such participation can manifest in the classroom through students' behaviors such as asking and answering questions, concentration and attentiveness during class, and persistence of learning efforts (Skinner et al., 2008). Unlike emotional engagement, the manifestation of behavioral engagement is often external and observable. Other researchers have extended the conceptualization of behavioral engagement to include students' school-attendance habits and participation in school-based extracurricular activities (Appleton et al., 2008; Blumenfeld et al., 2005; Christenson et al., 2012). Within the Ghanaian setting, children are socialized to respect and never

question the authority or knowledge of parents, teachers, and adults in society (Twum-Danso, 2010). Questioning authority or disobeying an adult's instructions can lead to punishment; thus, this social norm and its associated fear of punishment serve as barriers that prevent children from fully participating or emotionally engaging in discourse involving adults. Without the element of emotional engagement, students in such contexts are unlikely to exhibit the desired behavioral engagement.

Traditionally, as suggested by the large body of scholarship on engagement, emotion researchers have assumed emotional engagement shapes behavioral engagement. This relationship was explained by Pekrun and Linnenbrink-Garcia (2012) who noted, "specific emotions function to trigger and facilitate impulses for specific action and thus play a role in initiating behaviors" (p. 256). However, the literature is not equally clear on the relationship between emotional and behavioral engagement because many mixed findings have been reported. In some studies, the relationship was inverse because positive emotional engagement led to behavioral disengagement (Carver et al., 1996). In contrast, several scholars have noted times when negative emotions energized students to increase their behavioral engagement (Linnenbrink, 2007; Turner and Schallert, 2001; Pekrun et al., 2002). The current study adds to the literature by examining the influence of emotional engagement on behavioral engagement. Consistent with prior studies, we hypothesize a direct effect of emotional engagement on behavioral engagement.

2. Social support

Support from parents, peers, and teachers have emerged as critical determinants of student engagement, and these types of support have been specifically linked to improvement in mathematics (Azmitia et al., 2009), reading performance (Park and Bonner, 2008), appreciation of the school environment (Brewster and Bowen, 2004), and self-reported student sense of belonging (Adelabu, 2007). This study adopted Barnes and Duck's (1994, p. 176) definition of social support as "behaviors that, whether directly or indirectly, communicate to an individual that she or he is valued and cared for by others."

Several typologies of social support exist, but this study focused on five typologies (see Table 1) applicable to the Ghanaian context: informational, such as appraisal of progress; network, such as companionship from peers; emotional, such as warmth and kindness from peers and teachers; esteem, such as motivational messages from parents; and tangible support, such as parental assistance with child's homework (Ko et al., 2013). Notwithstanding the broad scope of these typologies, each type of social support can be classified as a formal or informal support system (Torsheim et al., 2012), depending on the interaction of the type of social environment and the actors who provide support.

For example, in the school setting, teachers have the ability to offer both informal and formal support. However, in developing countries in Africa, Asia, Central and South America, and the Middle East where cultures often foster a power distance between students and teachers, the teachers' default is more likely to be formal social support (Joy and Kolb, 2009; Whitehead, 2007; Woodward and Denton, 2013). Parental support is expected to be informal because parent–child interactions occur most frequently in the home environment. However, parents also offer formal support in their interactions with their children's teachers. For instance, parents might check in with classroom teachers about their children's progress and invest in helping their children succeed in school (Glozah and Pevalin, 2014).

Classmates offer informal support and they are expected to naturally interact with their peers in many informal ways, particularly when they interact outside of the school setting. Lynch and Cicchetti (1997) argued that "as children develop, their relationships with others continue to affect their ability to be actively engaged in school" (p. 83); thus, informal peer support is a key factor in engagement, but it is unclear if or to what extent peer support can be shaped. Given these

Table 1
Descriptive Statistics of Variables.

Latent variables	Manifest variables	*Mean* (*SD*)	Range
Behavioral engagement	BE1: I try hard to do well in school.	4.47(0.18)	2–5
	BE2: In class, I work as hard as I can.	4.44(1.00)	1–5
	BE3: When I am in class, I participate in class discussions.	4.19(1.02)	2.5
	BE4: I pay attention in class.	4.19(1.03)	1–5
	BE5: When I am in class, I listen very carefully.	4.26(0.97)	1–5
Emotional engagement	EE1: When I am in class, I feel good.	4.12(1.00)	1–5
	EE2: When we work on something in class, I feel interested.	4.09(1.04)	1–5
	EE3: Class is fun.	4.09(1.07)	1–5
	EE4: I enjoy learning new things in class.	4.67(0.74)	1–5
	EE5: When we work on something in class, I get involved.	4.29(0.99)	1–5
Classmate support	CS1: The students in my class enjoy being together.	3.63(1.29)	1–5
	CS2: Most of the students in my class are kind and helpful.	3.73(1.18)	1–5
	CS3: When a classmate is upset, other students comfort him/her.	3.72(1.37)	1–5
Teacher support	TS1: Our teachers treat us fairly.	4.15(1.01)	1–5
	TS2: When I need extra help, I can get it.	4.13(0.87)	1–5
	TS3: My teachers are interested in me as a person.	4.50(0.66)	2–5
Parental support	PS1: Attend Parent-Teacher Association (PTA) meetings at your school?	3.85(1.29)	1–5
	PS2: Discuss your school progress with your teachers?	2.78(1.15)	1–5
	PS3: Attend your school events such as sporting activities, speech and prize-giving events?	3.06(1.65)	1–5
	PS4: Volunteer at your school?	1.68(1.08)	1–5
	PS5: Make sure you do your homework?	3.84(1.43)	1–5
	PS6: Talk with you regarding their expectations for your school work?	3.98(1.20)	1–5
	PS7: Motivate you to try harder when you make a poor grade?	4.20(1.24)	1–5

questions around the factors affecting engagement, the present study focused on the home and school environments where students spend most of their time. Within these environments, three primary actors—parents, peers, and teachers—are of particular interest because they most often interact with students in the home and school environments.

3. Linking social support to student engagement

Bronfenbrenner's (1977) ecological systems theory is one of the theoretical perspectives commonly used to explain the link between social support systems (i.e., environments) and student outcomes. The theory asserts that personal development, including individual choices and actions, depends on both the individual's sociodemographic status and the person's interactions within the social environments in which he or she operates. Moreover, these social environments are often a web of interconnecting systems.

One tenet of the ecological systems theory holds that individuals' development or outcomes can be shaped by their direct interactions with each social system. A teacher's genuine interest in his or her students might create an enjoyable, creative classroom environment that fosters academic engagement. Research from mostly Western contexts has shown that when teachers directly foster a warm, caring relationship with students, that relationship not only provides students with structure but also cultivates students' ability to be independent, and as a result, the students tend to engage more in their classroom work, regardless of their social and demographic characteristics (e.g., Brewster and Bowen, 2004; Harber and Davies, 1998; Woolley and Bowen, 2007; Wentzel, 2009; Wigfield et al., 2006). In addition to the influence of teachers' support on engagement, the welcoming attitude of classmates can create a classroom atmosphere that enables academic work and contributes to student engagement. For instance, Wang and Eccles (2013) conducted a longitudinal study with 1157 students and found that improvements in classroom engagement were attributed to positive peer relations. Moreover, the connection between peer support and student engagement has been validated in other studies (Berndt, 2004; Gest et al., 2008; Kindermann and Skinner, 2012).

Parental support has also been found to have strong influence on student behavioral engagement (Annunziata et al., 2006; Sirin and Rogers-Sirin, 2005). Encouraging words from parents or demonstra-

tions of parental concern such as frequent check-ins with their children can be the impetus that pushes a student to devote more time and effort to school work. These three social support systems might be differentially influential on the level and quality of student engagement. Research has suggested the effects of various systems on engagement can vary widely because individuals respond differently to similar environments (Acle-Tomasini et al., 2016). However, the extent of variability in the effects of social systems on engagement has not been adequately explored in the sub-Saharan African context.

The ecological systems theory also emphasizes the relatedness of social systems, meaning that the home or school systems not only can directly affect the individual student but also can influence one another to shape the individual's outcomes. Certain reciprocal processes might exist between the support systems. Although the engagement literature does not specify the nature of the reciprocity, we know from the social learning theory that the way parents relate to their children can shape how children relate to their peers (Bylund et al., 2010; Perez-Brena et al., 2014). A teacher's inclination toward giving more or less attention to the progress of a particular student might depend on the extent of the parents' interest and attention to their children's education. This conceptualization suggests a mediated relationship between the support systems and student outcomes. Although this mediated conceptualization is sound, a notable gap exists in its validation because the empirical research that links social support (from teachers, parents, or peers) to student engagement has relied on correlational analyses and cross-sectional data from Western contexts.

Drawing from Bronfenbrenner's ecological systems theory and the extant literature, the current study sought to understand how social support influences student emotional and behavioral engagement in the sub-Saharan African context. We tested the hypothesis that parental and classmate support directly influences students' emotional engagement and indirectly influences students' emotional engagement through teacher support. We also hypothesized that students' emotional engagement affects behavioral engagement.

4. Methods

4.1. Data and study design

The study sample was drawn from a pilot quasi-experimental research project in Ghana designed to examine the impact of scholarships and matched savings accounts on students' psychosocial and educational outcomes. The 1-year project was initiated in 2014 in three public junior high schools in the Eastern and Greater Accra regions of Ghana. The project recruited 150 final-year students, of whom the present study uses a subsample of 135 students who completed pre- and post-test self-administered surveys. Study participants were between 12 and 23 years ($M = 16$, $SD = 1.81$) and the majority were girls (55%). The Institutional Review Board at the University of North Carolina at Chapel Hill reviewed and approved procedures for the project.

4.2. Measures

Student engagement was assessed using 10 items that tapped two domains of student engagement: emotional engagement and behavioral engagement. These two subscales were adapted from Skinner et al. (2009) and modeled as outcome variables in two separate models. As shown in Table 1, each of the two engagement subscales consisted of five items that used the same 5-point response scale ranging from 1 (*never*) through 3 (*sometimes*) to 5 (*always*).

This study focused on three support systems as the variables of interest: parental, classmate, and teacher support. See Table 1 for the specific items associated for each of the three support systems. *Parental support* was measured with six items and refers to the extent of parents' involvement in their children's schooling. The six items were rated on a 5-point response scale ranging from *never* (1) to *sometimes* (3) to *always* (5). The scale was adapted from Ames et al. (1993) and has been validated as an appropriate scale for Ghanaian youth (cite). The variable *classmate support* was assessed with three items that measured the extent of perceived support from classmates (Torsheim et al., 2000). *Teacher support* was also assessed with three items that measured the student's perception of support from teachers (Torsheim et al., 2000). The items for both classmate and teacher support were rated on a 5-point response set from 1 (*strongly disagree*) to 5 (*strongly agree*). Prior studies have validated teacher and classmate support as a two-factor structure (Torsheim et al., 2000, 2012). This study also controlled for gender with girls coded as 1 and boys coded as 0.

4.3. Data analysis

Structural equation modeling was used to examine the effects of different social support systems on students emotional and behavioral engagement. All analyses were conducted in MPlus 7.4 (Muthén and Muthén, 2015) with the means and variance adjusted weighted least squares as the estimation method because all the 5-point Likert type scales were treated as categorical variables with ordinal level measurement properties (Bowen and Guo, 2011). The cluster option in MPlus was used to account for the possibility of nonindependence of observations due to clustering of the study participants in the three project schools. We used the two-step modeling approach by ensuring the measurement models had good fit with the data before testing the structural relationships. Models were deemed as having acceptable fit if the $\chi2/df$ ratio was greater than 1, the root mean square error of approximation (RMSEA) was equal to or less than 0.05, the comparative fit index (CFI) was greater than 0.90, and the Tucker-Lewis index (TLI) was greater than 0.95, and all factor loadings were equal to or greater than 0.30 (Costello and Osborne, 2005; Hu and Bentler, 1999; Glaser, 1999; Kline, 2005). The DIFFTEST option in MPlus was used to compute a chi-square difference test to determine whether the reduced (baseline) or full model fit the data best.

5. Results

5.1. Descriptive results

Table 1 reports the descriptive statistics of the items used in the analysis. For the 10 engagement items measured on a 5-point response scale, students reported high levels of behavioral engagement (M range = 4.19–4.47, SD range = 0.18–1.03) and emotional engagement (M range = 4.09–4.67, SD range = 0.74–1.07). The median value was 5 for all 10 student engagement items, which meant at least half of the sample reported the highest level of engagement. Scores on all three teacher support items were relatively high (M = 4.13–4.50, SD = 0.66–1.01), with at least half of the sample reporting that they *strongly agree*[d] with the statement that their teachers were interested in them as a person. Students reported relatively high levels of classmate support (M = 3.63–3.73, SD = 1.18–1.37), although not as high as parental support. Overall, the mean scores for the seven parental support items ranged from low (M = 1.68, SD = 1.08) to medium (M = 4.20, SD = 1.65).

5.2. Measurement model

The measurement-only model, which included emotional engagement, teacher, classmate, and parental support latent constructs had a good fit to the data: $\chi2$ = 131.43, df = 113, p < 0.01, $\chi2/df$ ratio = 1.16, RMSEA = 0.04 (90% CI [.00, 0.06]), CFI = 0.96, TLI = 0.95. The factor loadings for emotional engagement (.32–.78), teacher support (.59–.97), classmate support (.48–.71), and parental support (.56–.88) were above the recommended cutoff of 0.30. The Wald test for discriminant validity were all significant at the 0.001 significance level, indicating that there was discriminant validity among the four constructs (Wald = 207.17). When we replaced the emotional engagement construct with the behavioral engagement construct, the measurement-only model had an acceptable fit to the data: χ^2 = 162.42, df = 118, p = 0.11, χ^2/df ratio = 1.38, RMSEA = 0.05 (90% CI [.03, 0.07]), CFI = 0.93, TLI = 0.91. All the factor loadings were above the 0.30 recommended cutoff, and the results of the Wald test confirmed that the four factors have discriminant validity (Wald = 338.01, p < 0.001).

5.3. Structural model

The baseline model, which constrained the paths from parent and classmate support to teacher support did not fit the data well: χ^2 = 632.95, df = 241, p = 0.001, χ^2/df ratio = 2.63, RMSEA = 0.12 (90% CI [.11, 0.13]), CFI = 0.79, TLI = 0.76. To the contrary, the full model with freed paths from parent and classmate support to teacher support had a good fit to the data: $\chi2$ = 279.47, df = 239, p = 0.001, $\chi2/df$ ratio = 1.15, RMSEA = 0.04 (90% CI [.01, 0.06]), CFI = 0.98 TLI = 0.98. The poor fit of the baseline mode suggest that it cannot compete with the full model as the final model. The statistically significant results of the chi-square difference test ($\Delta\chi^2$ = 423.58, Δdf = 2, p < 0.001) further indicated that the unconstrained full model fits the data better than the constrained baseline model. Therefore, the full model was retained as the final model.

5.4. Classmate support

Results show that classmate support is directly positively associated with emotional engagement (β = 0.69, SE = 0.04, p < 0.001) and indirectly positively related to behavioral engagement through the mediating role of emotional engagement (emotional → behavioral engagement: β = 0.84, SE = 0.12, p < 0.001). The Sobel test for indirect effects confirms that classmate support indirectly affects behavioral engagement through the emotional engagement (i.e., indirect effect: β = 0.66, SE = 0.07, p < 0.001). The standardized path

coefficient of 0.69 from classmate support to emotional engagement means when classmate support increases by one standard deviation from its mean, students' emotional engagement would be expected to increase by 0.69 standard deviations from its own mean, while holding all other relevant variables constant. Because there is no significant path from classmate engagement to behavioral engagement, emotional engagement is playing the role of a full mediator. Classmate support is also positively related to teacher support ($\beta = 0.34$, $SE = 0.09$, p 0.001) such that for every standard deviation increase in classmate support, the expected teacher support increases by 0.34 standard deviations from its own mean. Classmate support also correlates positively with parental support ($\beta = 0.66$, $SE = 0.07$, $p < 0.001$), which means as classmate support increases, so does parental support, and vice versa.

5.5. Parental support

Parental support has a mixed relationship with student engagement. Results show that support from parents is directly positively associated with behavioral engagement ($\beta = 0.21$, $SE = 0.02$, $p < 0.001$), but negatively associated with emotional engagement ($\beta = -0.26$, $SE = 0.02$, $p < 0.001$). For every one standard deviation from the mean of parental support, the expected level of behavioral engagement increases by 0.21 standard deviations, while the expected level of emotional engagement decreases by 0.26 standard deviations. The Sobel test for mediation confirms that there is a statistically significant indirect effect of the parental support on behavioral engagement through the mediation role of emotional engagement (i.e., indirect effect: $\beta = 0.66$, $SE = 0.07$, $p < 0.001$). This finding means emotional engagement carries some of the influence of parental support on behavioral engagement. However, emotional engagement is only a partial mediator because of the statistically significant path from parental support to behavioral engagement. Parental support is also positively related to teacher support ($\beta = 0.38$, $SE = 0.14$, $p < 0.01$). The magnitude of the influence of parental support on teacher support ($\beta = 0.38$) is slightly stronger than the influence of classmate support ($\beta = 0.34$).

5.6. Teacher support

Teacher support did not significantly predict emotional engagement ($\beta = 0.05$, $SE = 0.09$, $p = 0.59$) or behavioral engagement ($\beta = -0.23$, $SE = 0.15$, $p = 0.12$). Because teacher support was not significantly associated with either of the engagement constructs, teacher support is not a mediator in any of the hypothesized relationships. Although the path coefficients for teacher support were not significant, it is important to note that mixed directions of the coefficients from teacher support to emotional engagement ($+$) and behavioral engagement ($-$) are consistent with the mixed path directions from classmate support to emotional engagement ($+$) and behavioral engagement ($-$). Classmate support was also directly positively associated with teacher support ($\beta = 0.44$, $SE = 0.09$, $p < 0.001$). The expected level of teacher support increases by 44 standard deviation units when classmate support goes up by one standard deviation (Fig. 1).

5.7. Other relationships

The results also show that gender is a positive predictor of emotional engagement ($\beta = 0.21$, $SE = 0.09$, $p < 0.001$), but a negative predictor of behavioral engagement ($\beta = -0.35$, $SE = 0.09$, $p < 0.001$). The expected level behavioral engagement among of support increases by 44 standard deviation units when classmate support goes up by one standard deviation.

6. Discussion

This study incorporated a strengths-based approach for examining student engagement among junior high students in Ghana. By focusing on students in a resource-limited country such as Ghana, this investigation acknowledged the unique educational needs of the sampled students and the importance of identifying resources used to enhance student engagement. Specifically, the present study aimed at understanding from an ecological perspective how social support influences students' emotional and behavioral engagement in the sub-Saharan African context. Drawing on extant research and Bronfenbrenner's (1977) ecological systems theory, three unique processes were hypothesized: (a) that parental and classmate support have a direct effect on both emotional and behavioral engagement, (b) parental and classmate support have an indirect effect on both emotional and behavioral engagement, and (c) parent and classmate support have an indirect effect on behavioral engagement through the mediational role of teacher support and emotional engagement. Prior to testing these hypotheses, the factor structure of student engagement and social support were validated through confirmatory factor analyses. The structure of the final path model is presented in Fig. 2.

Overall, findings from this study support the proposition that student engagement depends on the social support available to the students. Among the different sources of support for students, classmate support was the strongest predictor of student engagement. Our findings are consistent with previous research findings (Dika and Singh, 2002) that emphasize the critical role of peers in shaping student behavior by providing emotional support, academic guidance, companionship and motivation for individual students, thereby enhancing comfort within the school environment. We found that classmates provide direct support by enabling students access to peers with whom they can share emotions, such as confiding in friends when in distress. This finding of a direct influence of classmate support is also consistent with the ecological systems perspective, which holds that personal development or outcomes are shaped by direct interactions with the social environment (Bronfenbrenner, 1977). Students who are socially alienated have a higher propensity to feel excluded and actively disengage from peer interactions and will not participate in classroom projects (Buhs et al., 2006). In turn, the academic performance of isolated students might be grossly affected by classroom overcrowding (Blatchford et al., 2011), a situation that is far too common in sub-Saharan Africa where about a third of the countries have more than 50 pupils per class in basic school (UNESCO Institute for Statistics, 2016). Such large class sizes make it easier for students to disengage and be nonparticipants.

Notably, the present study found that students who had classmate support often had teacher support as well. According to the ecological systems model, the classroom is the primary micro-context where students and teachers interact. The microtime provides classmates with quality social and emotional interactions within and outside the classroom (Bronfenbrenner and Morris, 1998). It could be that qualities (e.g., future orientation) within students that attract classmates to support them are the same characteristics that urge teachers to support these students. Recent research on the valence of teachers and students working together to engage other students has found that students who seek help from peers are also more likely to seek help from their teachers (Hamilton, 2013). Our finding has practical implications for teachers such as assessing student engagement, at least in part, by learning to observe the interactions of certain students with their peers. Because adolescence is a developmental period in which students are more inclined to trust their peers and seek autonomy from adults, students might be more likely to seek help from teachers if other classmates have established a precedent for doing so. Such relationships can contribute to students' willingness to ask clarifying and insightful questions, demonstrating mastery of classroom content, and enjoying the learning process (Klem and Connell, 2004).
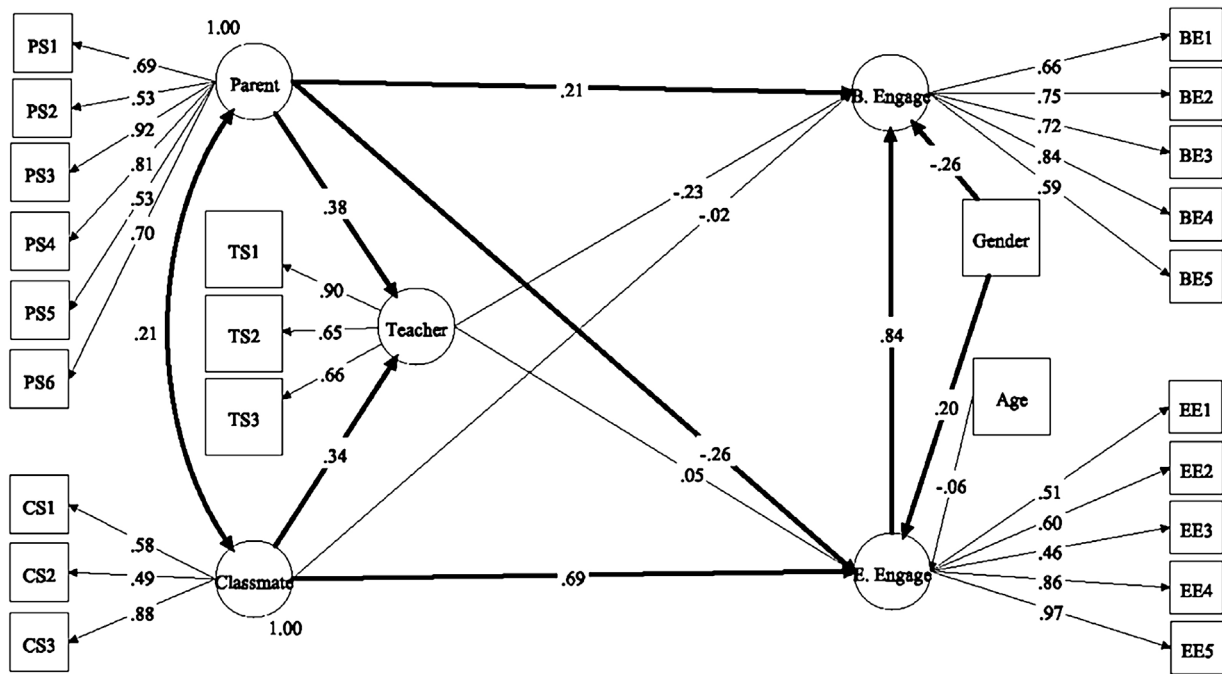
Fig. 1. Results of structural equation modeling of the relationships among parent, classmate, and teacher support and student emotional and behavioral engagement.
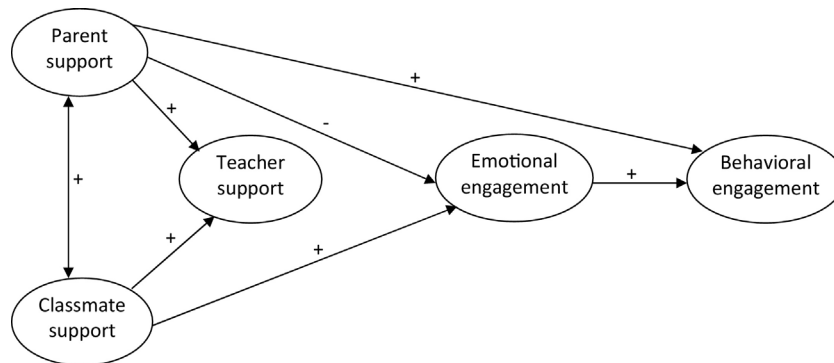

Fig. 2. The structure of the final path model, where "+" denotes a positive relationship and "−" denotes an inverse relationship.

Parental support has a positive association with student behavioral engagement, classmate support, and teacher support, but has a negative association with students' emotional engagement. The story behind this relationship is that parental support is important to student engagement in many ways; parents' engagement with teachers ensures that parents are kept abreast of their child's performance and areas for improvement. In many jurisdictions in sub-Saharan Africa where basic education is compulsory, parents have an obligation to ensure that their children adhere to school attendance requirements. Thus, when children would prefer not to go to school, parental involvement is key to averting truancy and tardiness (i.e., impact on school attendance). Additionally, when parents are involved and supportive of their child's education, teachers take notice and become more inclined to complement the parents' effort. Despite these positive effects, parental support has an important caveat: "Too much of a good thing can be bad," that is, excessive parental support can have negative effects. Overbearing pressure from parents can negatively affect students' emotional well-being. When parents have high expectations of their children and they constantly push their children to meet those expectations, such intense pressure can lead to unintended negative emotional effects. In many developing countries, households are established on the premise of a hierarchical parent-child relationship (i.e., the child is controlled by the parent and if the child disobeys, he or she is punished; Twum-Danso, 2010). This hierarchical relationship allows parents to control chil-

dren's behavior but not their emotions and feelings.

In contrast to the influence of parental support, we were surprised to find that teacher support did not predict student engagement among our study sample. This finding was contrary to those reported by Lam et al. (2012), Brewster and Bowen (2004), Klem and Connell (2004), whose findings suggested that teacher support was important in increasing student engagement. A plausible explanation for these conflicting findings might be that the specific influence of teacher support on student engagement within the Ghanaian context could be attributed to the education system, which is still a didactic and hierarchical system in which the teachers are the knowledge bearers. Typically, this type of learning environment does not promote active student engagement and critical thinking or provide students with opportunities to contribute to their learning. Another possible reason for the inconsistent findings might stem from differences in class size and teacher workload. The high teacher-student ratios in Ghanaian schools do not allow teachers to have close relationships with the students (Chowa et al., 2015). Research has indicated that close teacher–student relationships allow students to practice both help-seeking and help-giving behaviors that promote their engagement and their classmates' engagement (Asare, 2009; Martin and Dowson, 2009). However, in resource-limited countries such as Ghana, teacher morale is throttled by the poor compensation and undermined by the required implementation of certain teaching methods without consulting the

teachers (Bediako and Asare, 2010). The lack of sufficient student-centered teaching methods is likely to translate into limited student engagement.

Another noteworthy finding of this study is that emotional engagement is not only a precursor to behavioral engagement but also the strongest predictor, with a magnitude of effect (i.e., $\beta = 0.84$) 4 times greater than the next strongest predictor (parental support: $\beta = 0.21$). Our finding that emotional engagement reinforces behavioral engagement is consistent with work by Pekrun and Linnenbrink-Garcia (2012), which found that emotions were important to motivating attention and facilitating activities that drive learning among students. Therefore, when students are drawn into activities that are designed to simulate real-world scenarios, they tend to retain information and enjoy the learning process (Okumu et al., 2016). In turn, the students' acquired interest in the subject and the content shared in the classroom serve to motivate students to complete homework, work hard in school, participate in classroom discussions, pay attention in class, and listen carefully to classroom instructions. This interest all begins with the student enjoying the classroom environment, developing an appreciation for the subject, and understanding how the content being shared relates to his or her life. This finding of the strong effect of emotional engagement on behavioral engagement suggests the need for learning models that move away from static didactic teaching toward teaching models that engage students in the creating and learning processes such as problem-based learning that accounts for the day-to-day challenges that students face as a means of enhancing emotional engagement.

6.1. Implications for practice and policy

In order to increase student engagement, instruction methods need to shift from the traditional teacher-centered, hierarchical system to a more dynamic student-centered system that involves students as peer-tutors. A shift to dynamic instruction will allow the students to engage in participatory teaching processes in which they support their peers in the learning process. The collective peer support not only allows students to grasp and retain the course content but also creates an inviting environment that encourages students to develop an interest in the subject; as students develop an independent interest in the subject, they are better able to contribute to the knowledge of the teachers and fellow classmates. If students are engaged in the learning process, then they are more likely to reach out to their classmates and provide the support needed for their peers to be fully immersed in the learning process. Moreover, when students understand the relevancy of the subject content to their routine activities, they are more likely to be engaged in their learning. This shift from textbook problems to real-world issues help students make connection with their context, which may be a gateway toward engagement for students who might feel disconnected from traditional school environments and teaching methods.

Additionally, students may benefit from initiatives that encourage school administrators to facilitate the formation of afterschool support groups where peer-tutors can help classmates. In such an intentional environment, peer-tutors might be in a position to share explanations of materials and concepts in the easiest-to-understand language possible. Moreover, peer-tutoring arrangements may reduce the propensity for social alienation, as students are able to make friends within an environment in which people show concern for their academic advancement.

7. Conclusion

Our study has limitations worth mentioning. The most notable limitation is the use of a small sample size that limits the extent to which findings can be generalized different contexts. Because of design limitations (two measurement occasions), the study did not account for possible reciprocal connections of student engagement to teachers,

parents, and peers. Moreover, most of the variables used in the statistical models are subjective, self-report measures, which increases the risk of measurement errors. Despite these limitations and the caveats to the interpretation of the study results, the findings offer important suggestions on how teacher, student, parent support may be connected with student engagement, particularly in resources-limited countries where these relationships have not adequately explored. Data presented in this study suggests that students might engage in the learning process when they have classmate support, parental support, and peers who have a positive relationship with their teachers. We suggest that further studies with more representative samples from resource-limited countries replicate the models tested in this study. Such replication studies will provide more empirical clarity on the mechanisms that link social support systems to student engagement. The hypotheses tested in our study may serve as a foundation for such future research efforts on student engagement in different sub-Saharan African contexts.

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