Cultural Universality and Specificity of Student Engagement in School: The Results of an International Study from 12 Countries

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Abstract

Background

A comprehensive understanding of the contextual factors that are linked to student engagement requires research that includes cross-cultural perspectives.

Aims

The present study investigated how student engagement in school is associated with grade, gender, and contextual factors across 12 countries. It also investigated whether these associations vary across countries with different levels of individualism and socioeconomic development.

Samples

The participants were 3,420 7th, 8th, and 9th grade students from Austria, Canada, China, Cyprus, Estonia, Greece, Malta, Portugal, Romania, South Korea, the United Kingdom, and the United States.

Methods

The participants completed a questionnaire to report their engagement in school, the instructional practices they experienced, and the support they received from teachers, peers, and parents. Hierarchical linear modeling was used to examine the effects at both student and country levels.

Results

The results across countries revealed a decline in student engagement from Grade 7 to Grade 9, with girls reporting higher engagement than boys. These trends did not vary across the 12 countries according to the Human Development Index and Hofstede's Individualism Index. Most of the contextual factors (instructional practices, teacher

support, and parent support) were positively associated with student engagement. With the exception that parent support had a stronger association with student engagement in countries with higher collectivism, most of the associations between the contextual factors and student engagement did not vary across countries.

Conclusions

The results indicate both cultural universality and specificity regarding contextual factors associated with student engagement in school. They illustrate the advantages of integrating etic and emic approaches in cross-cultural investigations.

Keywords: student engagement, contextual factors, culture, individualism, collectivism, socioeconomic development

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Student engagement is a metaconstruct that comprises affective, behavioral, and cognitive dimensions (Fredricks, Blumenfeld, & Paris, 2004; Jimerson, Campos, & Greif, 2003). Affective engagement refers to students' positive feelings about learning (Skinner & Belmont, 1993) and the school they attend (Finn, 1989). Behavioral engagement indicates students' active participation in learning (Skinner & Belmont, 1993) and extra-curricular activities in school (Finn, Pannozzo, & Voelkl, 1995). Cognitive engagement signifies the deep cognitive processing students employ in learning (Walker, Greene, & Mansell, 2006). In the past two decades, student engagement has attracted increasing attention from researchers and educators because of its comprehensiveness in describing student motivation and learning in school, and its strong predictability of student developmental outcomes. Many studies have indicated that high student engagement is associated with better grades and conduct in school, higher levels of self-esteem and generally better adjustment outcomes (Finn & Rock, 1997; Maddox & Prinz, 2003).

Contextual Factors of Student Engagement

Given the importance of student engagement, researchers and educators are eager to learn more about its contextual factors. The understanding of these contextual factors is essential for developing suitable interventions to promote student engagement. According to Bronfenbrenner (1977), human development occurs within a set of nested systems. Like any personality factor, student engagement develops in an intricate web of mutually influencing systems. The most immediate systems in which student engagement develops are the school and the family. Within these microsystems, important agents of socialization (e.g., teachers, peers, and parents)

exert direct impact on student engagement. Research reveals that the quality of instruction and teacher-student relationship are positively associated with student engagement (Dotterer & Lowe, 2011; Furrer & Skinner, 2003). Peer support in school has also been documented as a strong predictor of student achievement (Cowie & Fernández, 2006; Rosenfeld, Richman & Bowen, 2000). As for family context, research indicates that parental support contributes to student academic performance (Fantuzzo, McWayne, Perry, & Childs, 2004; Waanders, Mendez, Downer, 2007).

The existing literature shows that support from teachers, peers, and parents facilitates student engagement in school. Nevertheless, with a few exceptions (e.g., McInerney, 2008; McInerney, Hinkley, Dowson, & Van Etten, 1998), most of the studies about these agents of socialization have been conducted in the West. The extent to which the results of these studies can be applied to non-Western contexts, however, is uncertain. Although some studies about the effects of contextual factors on student engagement were conducted in Eastern countries, these were published in their vernacular languages and in local journals (e.g., Kim & Lee, 2012). Thus, whether the impact of contextual factors on student engagement is culturally universal or not is largely unknown.

The broader culture and economy in which an individual is situated, are macrosystems that have undeniable influences on human development (Bronfenbrenner, 1977). However, they are often neglected in the scientific research regarding human development, and as Henrich, Heine, and Norenzayan (2010) poignantly describe, most of the psychological literature is built on studies from WEIRD (Western, Educated, Industrialized, Rich, and Democratic) societies. Thus, to have a comprehensive understanding of the contextual antecedents of student engagement, there is a pressing need to investigate how support from teachers, parents,

and peers in the microsystems functions in macrosystems with different cultures.

Individualistic vs. Collectivist Societies

Markus and Kitayama (1991) have described that many Asian countries endorse collectivism and insist on the fundamental relatedness of individuals to each other. In contrast, many Western countries advocate individualism and autonomy. Markus and Kitayama argued that this contrast has important consequences for cognition, emotion, and motivation. However, little research has been conducted to examine directly how the pursuit of collectivism or individualism moderates the association between support in the microsystems and student engagement.

The moderation effect of culture on the associations between support in the microsystems and student engagement may occur in three ways. First, the associations are the same across countries with different levels of individualism. This possibility implies cultural universality of the associations between support in the microsystems and student engagement. Second, the associations are stronger in collectivistic countries than in individualistic countries. This possibility implies cultural specificity and indicates that the support from teachers, peers and parents is more important for student engagement in societies where relatedness is more valued. Third, the associations are weaker in collectivistic countries than in individualistic countries. This possibility of cultural specificity does not seem to be viable according to what is known about collectivism and individualism, but it has received some empirical support from previous studies. Working with the secondary data of 107,834 15-year-olds in 41 countries from the Organization for Economic Cooperation and Development's (OECD) Program for International Student Assessment (PISA), Chiu (2007) found that in more collectivist countries, achievement in science was associated less with single parents, family socioeconomic status, resident

grandparents, and birth order. Chiu explained that extended family resources in collectivistic societies might have diluted the effects of immediate family resources. However, the first and second possibilities also have some empirical support from past research. Using the same data set from OECD-PISA, Chiu and Chow (2011) found no moderating effect of individualism on the link between teacher support and students' report of classroom discipline. Chiu, Chow, and McBride-Chang (2007) also found that the achievement scores of students in collectivistic societies were more linked to schoolmates' use of metacognitive strategies than in those in individualist societies.

Developed vs. Developing Countries

Socioeconomic development is another prominent factor within the macrosystem. It is important to investigate whether the associations between support in the microsystems and student engagement are the same, stronger, or weaker in developed countries than in developing countries. So far, the second possibility seems to have more empirical supports. Chiu (2007) found that family involvement showed stronger links to science achievement in richer countries. Chiu and Chow (2011) also found that teacher-student relations had stronger positive links to students' report of classroom discipline in richer countries.

Chiu and Xihua (2008) explained the stronger associations in richer countries with the complementary intangibles theory. They argued that the widespread availability of physical resources (e.g. public libraries) in richer countries may increase the value of intangible resources, such as parent time and attention. As the focus of their study was achievement instead of student engagement, whether the complementary intangibles theory works for the association support in the microsystems and student engagement remains a question for further investigation.

Gender and Grade Levels

In recent decades, two phenomena have attracted increasing attention in education. The first is the tendency for girls to achieve higher academic performance than boys (Hausmann & Zahidi, 2009). In many developed countries, females comprise nearly 60% of the university student populations (Johnson, 2008). The second is the tendency for students to have less intrinsic motivation over the school years (Dotterer, McHale, & Crouter, 2009). Students in senior grades are less likely to be interested in learning than students in junior grades (Lam, Pak, & Ma, 2007). It is important to investigate whether these findings prevail across countries with diverse cultural and socioeconomic backgrounds.

Overview of the Present Study

Most cross-cultural studies have not directly examined the moderating effects of culture and socioeconomic development on the associations between student engagement and support from important agents of socialization (e.g., teachers, peers, parents). A major purpose of the present study is to investigate how student engagement is associated with support from schools and families in different countries with diverse cultural and socioeconomic backgrounds. The present study utilized part of the data collected in a multinational project initiated by the International School Psychology Association (citation removed for the purposes of anonymity). The 12 countries in the present study include both WEIRD and non-WEIRD societies, with very different cultural values and socioeconomic background. The results of the present study should be able to fill the lacuna of the scientific research in non-WEIRD settings and reveal how factors in the microsystem and macrosystem interact in the development of student engagement in school.

The microsystem contextual factors being investigated in the present study

included classroom teachers' instructional practices, support from parents in family, and support from teachers and peers in school. The macrosystem contextual factors being investigated included individualism and socioeconomic development of the countries. Multilevel analyses were employed to examine the associations between student engagement and the contextual factors at the student level and how these associations may be moderated by individualism and socioeconomic development at the country level. At the student level, the effects of gender and grade were also examined.

Method

Participants

The participants included 3,420 junior high school students from 12 countries (i.e., Austria, Canada, China, Cyprus, Estonia, Greece, Malta, Portugal, Romania, South Korea, United Kingdom, and United States). Using an a-priori sampling plan, 300 students (100 7th, 100 8th, and 100 9th grade students respectively) were recruited from each country. The students were recruited from mainstream schools in urban areas to enable cross country comparison. Elitist schools or special schools were excluded. In total, 48 schools from 25 cities were involved in the present study. The ratio between female and male was about 1:1. The mean age was 13.82 with a range of 11 to 17 and a standard deviation of 1.15. The percentages of 7th, 8th, and 9th grade students were 35%, 31%, and 34% respectively. Demographic information in each of the 12 countries may be found in (citation removed for the purposes of anonymity).

Procedures

Participants were asked to complete a questionnaire in their schools. The questionnaire included questions about their engagement in school, perceptions of instructional practices, and the support they received from teachers, peers, and parents.

The questionnaire was administered by the teachers or researchers from the project.

The questionnaire was in English for Austria, Canada, Malta, the United Kingdom,

and the United States, but translated in the local language in the case of China, Cyprus,

Estonia, Greece, Portugal, South Korea, and Romania. Back-translation procedures

(Brislin, 1970) were used in the translation. Since Institution Review Board

procedures did not exist in all the 12 countries at the time of data collection, the

procedures to obtain parental consent were not standardized. Active parental consent

was sought in Canada and the United States, whereas passive parental consent was

sought in Austria, Estonia, Malta, Romania, and United Kingdom. Other procedures,

such as seeking approval from school principals, were adopted in China, Cyprus,

Greece, Portugal, and South Korea. The survey was administered at the end of a

semester and students were asked to answer the questions with reference to their

experience during that semester.

Measures at Student Level

    Student engagement. Student engagement in school was measured by a scale

that consists of three subscales, namely Affective Engagement, Behavioral

Engagement, and Cognitive Engagement (citation removed for the purposes of

anonymity). The Affective Engagement Subscale consists of 9 items that measure

students' liking for learning and school (e.g., "I like what I am learning in school").

The Behavioral Engagement Subscale consists of 12 items that measure students'

persistence and effort in learning (e.g., "I try hard to do well in school"). The

Cognitive Engagement Subscale consists of 12 items that measure students' use of

meaningful information processing strategies in learning (e.g., "When I study, I try to

connect what I am learning with my own experiences"). In the Affective and

Behavioral Engagement items, students indicated their agreement on a 5-point scale

ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), while in the Cognitive

Engagement items, students indicated the frequency of their use of cognitive

strategies on a 5-point scale ranging from 1 (*never*) to 5 (*always*). The data from the

12 countries fit well to a second-order model with the Affective, Behavioral, and

Cognitive Engagement as the first order factors and Student Engagement as the

second order factor (citation removed for the purposes of anonymity). These results

indicate that student engagement is a metaconstruct with affective, behavioral, and

cognitive dimensions. According to this model, the average of scores from the three

subscales was used to indicate student engagement, with higher scores indicating

higher engagement. This scale demonstrated good internal consistency ($\alpha = .78$).

Instructional practices. Students' perception of their teachers' instructional

practices was measured by the Motivating Instructional Contexts Inventory (MICI)

(Lam et al., 2007). The MICI consists of six subscales, namely Challenge, Real Life

Significance, Curiosity, Autonomy, Recognition, and Evaluation. They respectively

measure the extent to which students perceive that their teachers provide them with

challenging tasks, ensure real life significance in their learning activities, arouse their

curiosity, grant them autonomy, recognize their effort, and provide useful feedback for

their improvement. The MICI is composed of 24 items with 4 items in each subscale.

Students were asked to indicate how many of their teachers used the teaching

strategies described in the statements (e.g., "Teachers help us to understand the use of

what we are learning") on a 5-point Likert scale ranging from 1 (*none of them*) to 5

(*all of them*). The data from the 12 countries fit well to a second-order model with

Challenge, Real Life Significance, Curiosity, Autonomy, Recognition, and Evaluation

as the first order factors and Motivating Instructional Context as the second order

factor, $\chi^2 = (246, N = 3420) = 2784.13$, $p < .001$; NNFI = .98, CFI = .98 and RMSEA

= .06. The average of the six subscale-scores was used as an index of students'

perception of motivating instructional contexts in their school. High scores indicated

that the students perceived that most teachers in their school used motivating

instructional practices. This measure yielded high internal consistency ($\alpha = .91$).

   Teacher support. Students' perception of the social and emotional support they

received from their teachers was measured by three items (e.g., "At my school, there

is a teacher who is kind to me") adapted from the Caring Adult Relationships in

School Scale of the California Healthy Kids Survey (WestEd, 2000). Each item was

rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The average of the three item-scores was used to indicate students' perception of

teacher support. Higher scores indicated higher social and emotional support from

teachers. This measure demonstrated good internal consistency ($\alpha = .79$).

   Peer support. Students' perception of the social and emotional support they

received from their peers was measured by three items (e.g., "At my school, I have a

friend who really cares about me") adapted from the Caring Peer Relationships in

School Scale of the California Healthy Kids Survey (WestEd, 2000). Each item was

rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The average of the three item-scores was used to indicate students' perception of peer

support, with higher scores indicating higher peer social and emotional support. This

measure yielded good internal consistency ($\alpha = .82$). The data of teacher support and

peer support from the 12 countries fit well to a two-factor model with three items for

each of the specified factors, $\chi^2 = (8, N = 3420) = 115.40, p < .001$; NNFI = .98, CFI

= .99 and RMSEA = .06.

   Parent support. Students' perception of their parent support for their learning

was measured by a scale of eight items (e.g., "My parents discuss schoolwork with

me at home"). This scale was based on the major components of home support for learning in the Functional Assessment of Academic Behavior (Ysseldyke & Christenson, 2002). Each item on this measure was rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The average of the eight item-scores was used to indicate students' perception of parent support. Higher scores indicated higher parent support. This measure yielded good internal consistency (α = .85). The data from the 12 countries fit well to a one-factor model, $\chi^2 = (20, N = 3420) = 694.87$, $p < .001$; NNFI = .94, CFI = .96 and RMSEA = .09.

Measures at the Country Level

 Individualism. Hofstede's Individualism Index (IDV) was used to measure individualism for each country. In a questionnaire survey on work-related values administered to 100,000 employees of International Business Machines Corporation, a multinational company, in 40 countries, Hofstede (1980) derived an index for individualism from factor analyses of the responses. Individualism and collectivism are the two poles of the construct measured by this index. Higher scores on the Individualism Index indicate higher individualism and lower scores indicate higher collectivism. In the countries with higher scores on the Individualism Index, the ties between individuals are loose and everyone is expected to look primarily after himself or herself and his or her immediate family. In contrast, in the countries with lower scores on the Individualism Index, people from birth onward are integrated into strong, cohesive in-groups. The scores of the 12 countries on the IDV are presented in Table 1.

<div align="center">(Insert Table 1 about here)</div>

 Socioeconomic development. The Human Development Index (HDI) was used to capture the degree of socioeconomic development of the 12 countries. This index

was developed by the United Nations (Human Development Report, 2009) as a

comparative measure for development across countries. Up to 2010, the index

combined three dimensions: 1) life expectancy at birth, as a measure of population

health and longevity; 2) knowledge and education, as measured by the adult literacy

rate and the gross enrollment ratio in primary, secondary, and tertiary education; and 3)

standard of living, as indicated by the natural logarithm of gross domestic product per

capita at purchasing power parity. The HDI provides a global measure of

socioeconomic development of countries worldwide. The scores of 12 countries on

the HDI are included in Table 1.

Statistical Analyses

As students were nested within countries, both the students and the countries

should be considered as important units of analysis. Therefore, hierarchical linear

modeling (HLM; Raudenbush & Bryk, 2002) was used to conduct multi-level

analyses. HLM allows for the investigation of the relations between variables that

reside at different hierarchical levels. There are two levels of analyses in this study:

the student level and the country level.

At the student level, student engagement in school was regressed to grade,

gender, instructional practices, teacher support, peer support, and parent support. The

student-level model is represented by the equation:

$$\text{Student engagement}_{ij} = \beta_{0j} + \beta_{1j}(\text{Grade}) + \beta_{2j}(\text{Gender}) + \beta_{3j}$$

$$(\text{Instructional Practices}) + \beta_{4j}(\text{Teacher Support}) + \beta_{5j}(\text{Peer Support}) +$$

$$\beta_{6j}(\text{Parent Support}) + r_{ij},$$

where β_{0j} = mean student engagement in country j, β_{1j} = relation of grade to student

engagement in country j, β_{2j} = relation of gender to student engagement in country j,

β_{3j} = relation of instructional practices to student engagement in country j, β_{4j} = relation of teacher support to student engagement in country j, β_{5j} = relation of peer support to student engagement in country j, β_{6j} = relation of parent support to student engagement in country j, and r_{ij} = residual.

At the country level, the study examined whether the mean student engagement of each country varies according to the degree of individualism and socioeconomic development. The mean student engagement was regressed on the IDV and HDI, represented by the following equation:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{IDV}) + \gamma_{02}(\text{HDI}) + U_{0j}$$

where β_{0j} = the mean of student engagement in country j, γ_{00} = grand mean of student engagement in the 12 countries, γ_{01} = the relation between the IDV and student engagement, γ_{02} = the relation between the HDI and student engagement, U_{0j} = residual. If γ_{00} is statistically significant, student engagement is significantly different across the 12 countries. If γ_{01} and γ_{02} are statistically significant, the variation of student engagement across the 12 countries are related to the degree of individualism and socioeconomic development.

To investigate whether the associations between predictors at the student level and student engagement vary by the degree of individualism and socioeconomic development, the relation of each of these predictors to student engagement was regressed on the IDV and the HDI. For example, the following equation represents the regression of the relation of grade to student engagement on the two indices at the country level:

$$\beta_{1j} = \gamma_{10} + \gamma_{11}(\text{IDV}) + \gamma_{12}(\text{HDI}) + U_{ij}$$

where β_{1j} = the relation between grade and student engagement in country j, γ_{10} =

grand mean of such relation in the 12 countries, γ_{11} = the association of the IDV with

the relation between grade and student engagement, γ_{12} = the association of the HDI

with the relation between grade and student engagement, U_{1j} = residual. Significant

gammas indicate the relation between grade and student engagement varies with the

degree of individualism and socioeconomic development in the 12 countries.

Results

Correlation between Variables

Descriptive statistics and correlations for student engagement, grade, gender, and

contextual factors are presented in Table 2. The negative correlation between student

engagement and grade revealed a decline in engagement from Grade 7 to Grade 9.

The negative correlation between gender and student engagement indicated that girls

reported higher engagement in school than boys because girls were coded as 1 and

boys as 2. With regard to the contextual factors, student engagement was moderately

correlated with instructional practices, teacher support, and parent support.

Comparatively, the correlation between peer support and student engagement was

weaker, albeit statistically significant.

(Insert Table 2 about here)

Variance Components

An unconditional model with no predictors was run before the proposed model.

Estimation of variance components for both the unconditional model and the

proposed model are presented in Table 3. As shown in the results of the unconditional

model, 9.04% of the total variance of student engagement resided between countries.

In addition, the results of the proposed model show that all the predictors at Level 1

except peer support had a significant share in the total variance of student

engagement.

(Insert Table 3 about here)

Student-level Analyses

At the student level of the HLM, student engagement was regressed on grade, gender, and the four contextual factors. The student-level analysis of HLM is interpreted in a similar manner to a more traditional ordinary least-squares regression. However, country-level differences were controlled in the HLM. Although no country-level variable was included in the student level analysis, the HLM took into account that the students were nested in the 12 countries. As presented in Table 4, student engagement was predicted negatively by grade ($\beta = -.062$, $p = .005$), indicating a decline in student engagement across grade. There was also a marginally significant association between student engagement and gender ($\beta = -.068$, $p = .053$), indicating that that girls reported higher engagement in schools than boys. With regards to the contextual factors, student engagement was predicted by instructional practices ($\beta = .210$, $p < .001$), teacher support ($\beta = .159$, $p < .001$), and parent support ($\beta = .170$, $p < .001$), but not by peer support ($\beta = .019$, $p = .148$).

(Insert Table 4 about here)

Country-level Analyses

To test if the aforementioned betas vary across countries according to the degree of individualism and socioeconomic development, each was regressed on the IDV and HDI at country-level analysis. The mean of student engagement in each country was also regressed on the IDV and HDI to test if student engagement varies across countries according to individualism and socioeconomic development (see Table 4).

Student engagement. The mean of student engagement was significantly

different across the 12 countries ($\gamma = 3.375$, $p < .001$), but the difference was not

predicted by the IDV ($\gamma = -.001$, $p = .550$) and the HDI ($\gamma = -.108$, $p = .821$).

Grade and student engagement. The negative association between grade and

student engagement did not vary across countries according to the IDV ($\gamma = 0$, p

$= .587$) and the HDI ($\gamma = .065$, $p = .838$). None of the gamma coefficients was

statistically significant, indicating that the decline of student engagement across

grades levels was consistent across the 12 countries.

Gender and student engagement. The negative association between gender and

student engagement did not vary across countries according to the IDV ($\gamma = 0$, p

$= .882$) and the HDI ($\gamma = .133$, $p = .825$). None of the gamma coefficients was

statistically significant, indicating that the trend that girls reported higher engagement

than boys was consistent across the 12 countries

Instructional practices and student engagement. The positive association

between instructional practices and student engagement was consistent across

countries according to the IDV ($\gamma = .002$, $p = .143$) and the HDI ($\gamma = -.157$, p

$= .714$). None of the gamma coefficients was statistically significant, indicating that

the association between instructional practices and student engagement was consistent

across the 12 countries.

Teacher support and student engagement. The positive association between

teacher support and student engagement did not vary across countries according to the

IDV ($\gamma = .001$, $p = .352$) and the HDI ($\gamma = .018$, $p = .961$). None of the gamma

coefficients was statistically significant, indicating that the association between

teacher support and student engagement was consistent across the 12 countries.

Peer support and student engagement. The nonsignificant association between

peer support and student engagement did not vary across countries according to the

IDV ($\gamma = .001$, $p = .3475$) and the HDI ($\gamma = -.187$, $p = .445$). None of the gamma

coefficients was statistically significant, indicating that the nonsignificant association

was consistent across the 12 countries.

Parent support and student engagement. The positive association between

parent support and student engagement did not vary across countries according to the

HDI ($\gamma = .624$, $p = .129$). However, it varied according to the IDV ($\gamma = -.002$, p

$= .038$). The association between parent support and student engagement was stronger

in countries with high collectivism than in those with high individualism.

<div align="center">**Discussion**</div>

Universality and Specificity

The results revealed a decline in engagement from Grade 7 to Grade 9 and higher

engagement for girls than for boys. These trends did not vary across the 12 countries

according to cultural values and socioeconomic development. Most of the contextual

factors (instructional practices, teacher support, and parent support) were positively

associated with student engagement. Although the zero-order correlation indicated

that peer support was positively and significantly associated with student engagement,

the positive association was no longer significant when additional factors were

included in the multi-level analyses. Most associations between contextual factors in

the microsystems and student engagement did not vary across the 12 countries

according to cultural values and socioeconomic development. However, there was one

exception that parent support had a stronger association with student engagement in

countries with higher levels of collectivism.

Unlike Chiu (2007) who found that extended family resources in collectivistic

societies might have diluted the effects of immediate family resources, the present

study did not reveal such collective dilution. The association between parent support and student engagement was stronger rather than weaker in collectivistic countries. The absence of collective dilution might be due to the fact that the family factors in Chiu's study (2007) were static demographic variables (e.g., single parents, family socioeconomic status) instead of dynamic interaction variables (e.g., parent support). When parent-child interaction is involved, the extended family resources in collectivistic societies do not appear to dilute the effects of immediate family resources.

The complementary intangibles theory proposed by Chiu and Xihua (2008) was not supported by the present study, because all associations between student engagement and the microsystem contextual factors did not vary across countries according to socioeconomic development. Regardless of the degree of country development, teacher and parent support are associated positively with student engagement. The findings underline the universal importance of the intangible support from school and family to student engagement, regardless of the availability of the country's physical resources.

The multilevel analyses did not reveal a significant association between peer support and student engagement. Moreover, this finding was universal to all the participating countries regardless of cultural values and socioeconomic development. These results contrast with the entrenched belief that peer influences are increasingly important in early adolescence. Nevertheless, this finding is understandable when the support from teachers, parents, and peers is examined in relation to children's different outcomes. In a study with 6th graders, Wentzel (1998) found that different outcomes were associated with supports from different agents of socialization. Whereas teacher and parent support was predictive of class-related and school-related

interest, peer support was predictive of prosocial goal pursuit. These findings suggest that peer support is still important, although it is not as robust as teacher and parent support when the issue is school-related interest.

Contributions

Employing a cross-cultural perspective, the present study offers substantial contributions to the existing body of knowledge in student engagement. With data from both WEIRD and non-WEIRD countries, the present study examined how cultural values and socioeconomic development in the macrosystems moderate the associations between student engagement and the support from important agents of socialization in the microsystems. These findings address an important gap in the understanding of student engagement and its contextual factors. These results are consistent with the socio-ecological theory (Bronfenbrenner, 1977), revealing that student engagement develops in an intricate web of mutually influencing systems. Its development is subject to factors within the individual students (e.g., gender and grade) as well as factors in the microsystem (e.g., support from teachers, peers and parents) and factors in the macrosystem (e.g., cultural values and socioeconomic development).

The present study revealed the universality as well as some specificity of the psychological processes that contribute to the development of student engagement. The findings showed that most of the associations between support from important socializing agents and student engagement were similar across countries, though parent support had a stronger link with student engagement in countries with higher collectivism. These findings highlight the necessity to integrate the etic and emic approaches in cross-cultural investigation and echo the advocacy of King and McInerney (2014) for the "middle ground" that acknowledges both cross-cultural invariances and differences.

Berry (2013) described three putative stages of the development of cross-cultural psychology. The first stage involves an initial use of the imposed etic approach that aims to transport findings obtained in Western cultures to other cultures. The second stage involves an emic search for local phenomena. In the third stage, the approaches in the previous two stages are synthesized to create a global psychology. The present study is an example of the third stage, illustrating the advantages of a more comprehensive perspective by looking for both cultural differences and similarities.

In addition to making contributions to cross-cultural psychology, the present study also has significant implications for educational practices. The findings of the universal importance of instructional practices and the support from teachers and parents are encouraging to most educators. Regardless of cultural values and socioeconomic development, how teachers teach and relate to their students is important for student engagement in school. Although parent support has a stronger association with student engagement in societies with higher collectivism, it is also positively associated with student engagement in societies with higher individualism. Efforts to improve instructional practices and garner support from teachers and parents will enhance student engagement in countries around the world.

While the universal importance of the support from teachers and parents is encouraging, the universal trend that boys and older students reported lower engagement in school is disconcerting. Educators need to make more efforts to enhance the engagement of boys in school and to prevent the decline of engagement in all students over the school years. This entails the effort to make educational practices more responsive to, and supportive of, the learning needs of students, such as providing students with the opportunities for interactive, enquiry-based and relevant learning experiences, use of integrated technology and multimedia, and a

collaborative and supportive relational context (Taylor & Parsons, 2011). Similarly, quality pedagogy and healthy classroom relationships are critical to the enhancement of the engagement of male students. Meaningful and hands-on activities linked to the interests and real life experiences of the students are particularly helpful in recruiting boys' engagement (Alloway, Freebody, Gilbert, & Musprat, 2002; Reichert & Hawley, 2014).

Limitations and Future Directions

The present study has some limitations. First, this was a cross-sectional study so findings pertaining to grade differences should be regarded with caution. To have a better understanding of the vicissitudes of student engagement across school years, there is a need for longitudinal studies. Second, all the measures were student self-reports and therefore common method bias could not be excluded. Future studies may be strengthened by including measures from other sources as well. Third, the measures of support are "broad strokes" measures that only depicted the general picture without the subtle nuances. For example, certain teacher behaviors may be considered as caring by students in collectivistic societies but controlling by students in individualistic societies (Zhou, Lam & Chan, 2013). Future studies with more focused scope and fine-tuned measures will offer another perspective of the same phenomenon. For example, the observation data of actual parent-child interaction in different cultures will provide more details of cultural similarities and differences. Fourth, the proposed model in the current study only involved two levels. While contextual supports in the microsystems were treated as the first level variables, culture and socioeconomic development in the macrosystem were treated as the second level variables. In fact, many more levels should have been involved because students were nested within classrooms, schools, cities, and countries. However, to

conduct analyses with more levels requires a much larger sample with more countries involved. One possibility is to make use of existing databases, such as Program for International Student Assessment (PISA) (Organization for Economic Cooperation and Development, 2014). The inclusion of more countries and more students for multilevel modeling is a promising direction for cross-cultural investigation in the future.

Since most of the world's population is not WEIRD, there is a pressing need for more cross-cultural studies. Collaborative research crossing countries and cultures, the adoption of multiple research methods, and the integration of etic and emic approaches, will enrich our understanding of cultural universality and specificity in many important psychological processes.

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Table 1

Individualism and Development Indices of the 12 Countries.

Country	Individualism Index	Human Development Index
Austria	55	.85
Canada	80	.89
China	20	.66
Cyprus	35	.81
Estonia	60	.81
Greece	35	.85
Malta	59	.81
Portugal	27	.80
Romania	30	.76
South Korea	18	.87
United Kingdom	89	.85
United States	91	.90

Note. Hofstede's Individualism index was not available for Cyprus. The Greek index was used as the proxy for Cyprus as all the participants in Cyprus were Greek descendants. The correlation between the Individualism Index and Human Development Index was .59, $p < .01$.

Table 2

Means, Standard Deviations, and Correlations for Student-Level Variables.

	Mean (SD)	1	2	3	4	5	6	7
1. Student Engagement	3.37 (0.56)	--						
2. Grade	--	-.16**	--					
3. Gender	--	-.11**	.02	--				
4. Instructional Practices	2.98 (0.74)	.50**	-.13**	-.01	--			
5. Teacher Support	3.78 (0.93)	.48**	-.05**	-.09**	.42**	--		
6. Peer Support	4.11 (0.92)	.28**	-.04*	-.26**	.21**	.40**	--	
7. Parent support	3.93 (0.79)	.43**	-.06**	-.08**	.33*	.30**	.25**	--

Note. Girls were coded as 1 and boys as 2. The grade was from Grade 7 to Grade 9.

$* p < .05, ** p < .01.$

Table 3

Final Estimation of Variance Components for the Unconditional Model and Proposed Model

Random Effect	Standard Deviation	Variance Component	% in Total Variance	Chi-Square
	Unconditional Model			
Intercept	0.169	0.028	9.035%	314.074**
Level 1	0.535	0.286	90.965%	
	Proposed Model			
Intercept	0.078	0.006	2.982%	62.461**
Grade	0.046	0.002	1.040%	26.660**
Gender	0.091	0.008	4.136%	34.068**
Instructional Practices	0.063	0.004	1.952%	25.019**
Teacher Support	0.051	0.003	1.273%	23.765**
Peer Support	0.025	0.001	0.322%	12.802
Parent Support	0.058	0.003	1.640%	24.887**
Level 1	0.418	0.175	86.655%	

Note. $df = 11$ for unconditional model and $df = 9$ for proposed model.

** $p < .01$.

Table 4

HLM Results Predicting Student Engagement with Predictors at the Student Level, and Predicting These Associations with Predictors at the Country Level

Fixed Effect	Predictors at Country Level	Unstandardized Coefficient	*SE*	*t*-Ratio
Student Engagement		3.375	0.024	142.365**
	IDV	-0.001	0.001	-0.621
	HDI	-0.108	0.464	-0.233
Grade		-0.062	0.016	-3.852**
	IDV	0.000	0.001	0.562
	HDI	0.065	0.309	0.211
Gender		-0.068	0.030	-2.219*
	IDV	0.000	0.002	0.153
	HDI	0.133	0.586	0.228
Instructional Practices		0.210	0.022	9.665**
	IDV	0.002	0.001	1.602
	HDI	-0.157	0.415	-0.378
Teacher Support		0.159	0.018	9.030**
	IDV	0.001	0.001	0.983
	HDI	0.018	0.344	0.051
Peer Support		0.019	0.012	1.580
	IDV	0.001	0.001	0.992
	HDI	-0.187	0.234	-0.798
Parent Support		0.169	0.020	8.588**
	IDV	-0.002	0.001	-2.437*
	HDI	0.625	0.374	1.670

Note. IDV = Individualism Index; HDI = Human Development Index; Girls were coded as 1 and boys as 2.

* $p < .05$, ** $p < .01$.