Author Details

1. Ronnel B. King
Faculty of Education, The University of Hong Kong
Department of Special Education and Counseling,
The Hong Kong Institute of Education

Room F-11 Block D1-1
The Hong Kong Institute of Education
Tel: (852) 2948-7788

Email: ronnel.king@gmail.com; bornasal@ied.edu.hk

Research interests: motivation and learning in cross-cultural settings; educational measurement

Relevant publications:
1. **King, R.B**.*,* McInerney, D.M., & Watkins, D.A. (2012). How you think about your intelligence determines how you feel in school: The role of theories of intelligence on academic emotions. Published Online First 15 May 2012. *Learning and Individual Differences.*
2. **King, R.B.** (2012). How you think about your intelligence influences how adjusted you are: Implicit theories and adjustment outcomes. *Personality and Individual Differences, 53,* 705-709.
3. **King, R.B.,** McInerney, D.M., & Watkins, D.A. (2012). Competitiveness is not that bad…at least in the East: Testing the hierarchical model of achievement motivation in the Asian setting. *International Journal of Intercultural Relations, 36,* 446-457.
4. **King, R.B.**, & Watkins, D.A. (2012). Cross-cultural validation of the five-factor structure of social goals. *Journal of Psychoeducational Assessment, 30(2),* 181-193.
5. **King, R.B.,** McInerney, D.M., & Watkins, D.A. (2012). Studying for the sake of others: The role of social goals on academic engagement. *Educational Psychology, 32(6),* 749-776.

2. Dennis M. McInerney
Department of Special Education and Counseling,
The Hong Kong Institute of Education

Email: dennismm@ied.edu.hk

Research interests: motivation in cross-cultural settings, Aboriginal students, American-Indian students

Relevant publications:

1. **McInerney, D. M**. (2012). Conceptual and methodological challenges in multiple goal research among very remote Indigenous Australian students. *Applied Psychology: An International Review, 61 (4), 634-668.*
2. Lee, J. Q., **McInerney, D.M.**, Liem, G. A. D., & Ortiga, Y. Y. (2010). The relationship between future goals and achievement goal orientations: An intrinsic-extrinsic motivation perspective. *Contemporary Educational Psychology*, *35,* 264-279.
3. **McInerney, D. M**. (2008). Personal investment, culture and learning: Insights into school achievement across Anglo, Indigenous, Asian and Lebanese students in Australia. *International Journal of Psychology*, *43*, 870-879.
4. **McInerney, D. M. (2004).** A discussion of future time perspective: Contemporary Research. *Educational Psychology Review, 16.* 141-151**.**
5. Dowson, M., & **McInerney, D. M.** (2001). Psychological parameters of students' social and work avoidance goals: A qualitative investigation. *Journal of Educational Psychology, 93*, 35-42.

3. David A. Watkins

Graduate School of Education
University of Melbourne

Email: *drdawatkins@gmail.com*

Research interests: Chinese learner, motivation, self-esteem, self-concept, forgiveness

Relevant publications:
1. **Watkins, D. A.,** McInerney, D. M., & Lee, C. (2002). Assessing the school motivation of Hong Kong students. *Psychologia, 45*, 144-154.
2. **Watkins, D. A.**, & Biggs, J.B. (1996) (Eds). *The Chinese learner: Cultural, psychological and contextual influences.* Hong Kong: Comparative Education Research Center, The University of Hong Kong.

Examining the role of social goals in school: A study in two collectivist cultures

Abstract

Achievement goal theorists have mostly focused on the role of mastery and performance goals in the school setting with little attention being paid to social goals. The aim of this study was to explore the role of social goals in influencing educational outcomes in two collectivist cultures: Hong Kong and the Philippines. Results showed that social goals were able to predict additional variance in various adaptive educational outcomes even after controlling for the effects of mastery and performance goals. Implications for cross-cultural research are discussed.

Keywords: *social goals; achievement goals; motivation in cross-cultural settings*

Introduction

The goal construct has become a focal variable in psychological research (Austin & Vancouver, 1996; Elliot, 2008). Goals have been conceptualized as catalysts that direct energy for the realization of desired outcomes (Heckhausen, 1991). The pursuit of qualitatively different goals provides an interpretive framework that results in different patterns of emotional, behavioral, and cognitive responses (Elliot, 2008).

Goals have dominated current theorizing on academic motivation through the prominence of achievement goal theory (Hulleman, Schrager, Bodmann, & Harackiewicz, 2010). Achievement goal research mostly focuses on the impact of mastery and performance goals on various educational outcomes (Elliot, 2005). However, an exclusive focus on mastery and performance goals seems overly restrictive. Social goals which emphasize relational and affiliative concerns have been largely neglected in the literature (see King & McInerney, 2012; King & Watkins, 2012b; Urdan & Maehr, 1995 for reviews). The lack of research on social goals becomes more problematic when educational psychologists want to investigate achievement motivation in collectivist settings. There is considerable evidence suggesting that social goals are especially salient in collectivist cultures where people construe themselves as tightly interwoven with their social groups (Cheng, 2005; King, McInerney, & Watkins, 2012b; Markus & Kitayama, 1991; Yu & Yang, 1994).

In this study, we utilize Personal Investment (PI) as our theoretical framework. PI Theory posits a multidimensional conceptualization of goals which includes social goals alongside mastery and performance goals (see Maehr & McInerney, 2004; McInerney & Liem, 2009 for reviews). The aim of the present study was to determine the role of social goals in influencing various learning outcomes (learning strategies,

motivational engagement, and effort) across two collectivist cultures: Chinese and Filipino settings (Hofstede, 1980, 2001).

Achievement goal theory

Achievement goal theory claims that students bring different kinds of goals into the classrooms such as mastery and performance goals (Elliot, 2005). Students who pursue a mastery goal want to develop academic competence, while those who pursue a performance goal want to demonstrate their competence relative to others. Later modifications of this theory have incorporated the approach-avoidance dimensions (see Elliot, 2005 for an historical review) resulting in four types of achievement goals: mastery approach, performance approach, mastery avoidance, and performance avoidance. However, in this study we only include approach forms of goals thus we limit our discussion to mastery approach and performance approach goals.

Mastery and performance goals emphasize the attainment of personal competence, albeit the standards of success can be different (defined by self-set standards for mastery goals and normative comparisons for performance goals). This focus on personal competence is reflected in items commonly used to tap these two goals. Students are usually asked whether they want to study because they are interested in the material (mastery approach) or whether they want to study because they want to show that they are better than other students (performance approach) (e.g., Dowson & McInerney, 2004). Although various measures of achievement goals are available in the literature, most of them conform to the examples described above. Mastery and performance goal items do not usually contain any explicit reference to significant others (e.g., parents, teachers, friends).

There is a consensus in the literature that mastery approach goals are adaptive, leading to deep learning strategies, motivational engagement, and effort exertion in school (e.g. Wolters, 2004). A recent meta-analysis has confirmed this, indicating that mastery goals have mostly been found to be associated with beneficial learning outcomes across different cultures (Hulleman et al., 2010). The association of performance approach goals with educational outcomes is somewhat more ambiguous with some studies documenting positive effects, others negative consequences, and still others non-significant relations with other important constructs in the nomological network (Elliot & Moller, 2003; Harackiewicz et al., 2000; Hulleman et al., 2010; Karabenick, 2003; Senko & Miles, 2008)

Achievement goal research has produced an impressive body of knowledge concerning how mastery and performance goals impact achievement-related behaviors (see Elliot, 2005 for an historical review). However, a limitation of the achievement goal framework is its near exclusive focus on competence-linked mastery and performance goals thereby neglecting other types of goals such as social goals which can also motivate students. Dowson and McInerney (2001, p. 40) argued that "students' social orientations are not peripheral to…academic performance and achievement. Rather, these orientations may directly influence students' psychological processes as they strive toward academic achievement."

Personal Investment Theory and Social Goals

A better model for examining a wider range of goals across different cultural settings would be Personal Investment (PI) Theory. We chose to situate this research within PI Theory because it offers a more generative framework for examining the impact of various types of goals including both achievement and social goals on learning outcomes. It has been designed to be a cross-culturally relevant theory of

achievement motivation, positing a multidimensional model of motivational goals in school. It stands in contrast to achievement goal theory which has been criticized by some psychologists for its overly narrow conception of goals as evinced by its near exclusive focus on mastery and performance goals. PI Theory also offers distinct advantages compared to other theories of achievement motivation in educational psychology which has marginalized the role of culture in achievement motivation (see McInerney & Liem, 2009; Zusho & Clayton, 2011 for reviews).

From its inception, PI Theory has been designed to be culturally sensitive by including a variety of goals that are deemed to be salient for students from diverse cultures (Maehr & McInerney, 2004; McInerney & Liem, 2009). It designates three distinct classes of motivational goals as crucial to understanding achievement-related behaviours: mastery goal, performance goal, and social goal (Watkins, McInerney, & Lee, 2002) (See Table 1 for the definitions). Its definitions of mastery and performance goals converge with the definitions of achievement goal theory.

In contrast to mastery and performance goals, which are competence-linked goals, a social goals are primarily socially-driven.

Students who pursue social goals are focused on achieving a sense of belongingness with their friends and on helping others. Maehr and McInerney (2004) referred to social goals more specifically as social solidarity goals.

Insert Table 1 about here.

In this study, we adopt the definition of social goals from Personal Investment (PI) Theory. Social goals have a relational focus when compared to mastery and performance goals. The emphasis is on wanting to be with others and desiring to help others (Maehr & McInerney, 2004; McInerney & Ali, 2006). Students adopting social goals are assumed to be more motivated when they are provided opportunities to

study with their peers and help their friends with school work as opposed to doing these tasks by themselves. In contrast, students adopting performance goals become more motivated when they are outperforming other students, while those with mastery goals feel motivated when they are improving their self-competence according to their own intrapersonal standards.

There is an inherent difficulty in researching social goals because they can be considered a muddled construct in the educational psychology literature with different researchers ascribing the same term "social goals" to different psychological phenomena. The gallimaufry of opinions on what actually constitutes a social goal may result in ambiguities with regard to interpreting the results associated with social goals (see King & Watkins, 2012b; Urdan & Maehr, 1995 for overviews).

The definition of social goals in PI Theory differs from other alternative conceptualizations (see King & McInerney, 2012; King & Watkins, 2012b; Urdan & Maehr, 1995 for reviews). For example, Urdan and Maehr (1995) argued that social goals are best defined as social reasons for studying. Wentzel (2000) studied social goals from a content perspective and looked at the types of social outcomes students are trying to attain. Ryan and Shim (2006) examined social achievement goals which pertain to why and how students pursue social competence. Asian scholars taking an indigenous approach have studied socially-oriented achievement motivation which can also be considered as a type of social goal (SOAM; Yu & Yang, 1994). SOAM occurs when significant others define the goals, standards, means of goal attainment and achievement outcomes.

Researchers using these diverse definitions have obtained different results. For example, Leondari and Gonida (2007) documented negative consequences of pursuing social goals which were defined as seeking approval from adults. They

found that students with this type of social goal were more likely to adopt self-handicapping strategies. Ryan, Hicks, and Midgley (1997) showed that certain types of social goals such as those pertaining to the seeking of social status were related to avoidance of help-seeking. Students who pursued this type of social goal were more likely to feel that their self-worth was threatened when they sought help from others. Nelson and DeBacker (2008) also reported negative relationships between social goals (defined as seeking for social status among peers), self-efficacy, and mastery goals.

However, when social goals were broadly defined as wanting to achieve a sense of belonging and helping others—which is more congruent with the definition adopted in PI Theory—results were generally more positive. A possible reason for this is that learning does not occur in a social vacuum (Wentzel, 1999, 2000, 2009). Students need to cooperate with their peers and seek help from others in order to succeed. For example, students can form study groups in order to improve their learning or they can ask help from other students if they do not understand the material. Students who pursue social goals are able to accomplish these more effectively and thus are more likely to succeed in school (King & McInerney, 2012; King, McInerney, & Watkins, 2012b). As Wentzel, Donlan, and Morrison (2012, p. 79) wrote, "Being successful at school requires students to perform a range of social as well as academic tasks. In addition to mastering subject knowledge, developing effective learning strategies, and performing well on tests, adolescents also must work to maintain and establish interpersonal relationships, strive to develop social identities and a sense of belongingness, and observe and model standards of performance displayed by others."

Empirical research supports this contention. Wentzel (1996, 2000) found that students who pursued social goals such as prosocial and social responsibility goals had more adaptive learning outcomes. Studies utilizing the PI framework have shown that social goals are related to positive learning outcomes. For example, Lee (2007) and Watkins, McInerney, and Boholst (2003) found that social goals were positively correlated with deep learning strategies. Social goals were also found to be positively related to having a positive academic self-concept, being aware of the larger purpose of schooling, and being self-reliant in the classroom (King, Ganotice, & McInerney, 2012). Social goals are also negatively associated with negative academic self-concept (King, Ganotice, & Watkins, 2012). King, McInerney, and Watkins (2012b) showed that social goals associated with enhancing interpersonal relationships and helping others were positively associated with various indices of academic engagement. Qualitative research conducted by Dowson and McInerney (2001, 2003) showed that social goals that focus on being with friends facilitated engagement in learning and positive feelings towards school. Taken together, these studies show that students who want to help others and remain affiliated with their peershave more positive learning outcomes.

Compared to mastery and performance goals, our knowledge of how social goals impact learning is still lagging behind. Thus, a study that specifically looks into the nomological network associated with social goals could provide important insights.

Culture and social goals

There are a number of studies, based both on the individualism/collectivism typology and PI Theory which indicate that the salience of social goals may vary across cultures (McInerney, 2008; McInerney, Roche, & McInerney, 1997; Watkins, McInerney, Lee, Akande, & Regmi, 2002). In collectivist cultures, social goals are

assumed to be powerful energizers of achievement-related behaviours (King & Watkins, 2012b; Yu & Yang, 1994). Urdan and Maehr (1995) argued that social goals may be adaptive in collectivist cultures because such goals "may represent a more internalized type of achievement goal, leading to increased effort and concern with learning and achievement" (p. 225).

In collectivist cultures, individuals see themselves as part of a relational fabric. They do not consider themselves as bounded or autonomous and their identities are closely linked to their significant others (Markus & Kitayama, 1991). In such cultures, achievement is defined in social and not just individual terms (Yu & Yang, 1994). This is especially true in the educational domain where students want to succeed in school not only for themselves but also for others (Salili, 1995; Stevenson, Stigler, & Lee, 1990). Numerous studies conducted among collectivist cultures especially those from Asia have shown the salience of social goals (e.g., Bernardo, 2008; Bernardo, Salanga, & Aguas, 2008; King & McInerney, 2012; King, McInerney, & Watkins, 2010, 2012; King & Watkins, 2012a; Liem, Martin, Porter, & Colmar, 2011; Liem & Nie, 2008).

Students from collectivist cultures have also been shown to be more group-oriented in their approach to studying. They practice cooperative and collaborative learning and they engage in these behaviors spontaneously even without teacher instruction (Tang, 1996; Tang & Biggs, 1996; Volet & Renshaw, 1995). These behaviors seem to reflect that students from collectivist cultures value belongingness with friends and helping others, which are central to the definitions of social goals in PI Theory.

Adopting social goals, however, is not exclusive to students from collectivist cultures. Research among Western students has shown that Western students also

espouse social goals (e.g. Ford, 1996; Urdan, 1994; Wentzel, 2000). However, there is considerable literature to support the contention that social goals are especially powerful motivators in collectivist cultures (e.g. Chang & Wong, 2000; 2008; King, McInerney, & Watkins, 2010; King & Watkins, 2012a, 2012b; Yu & Yang, 1994; Tao & Hong, 2000).

In this study, we recruited participants from two different collectivist cultures. Because they are both collectivist, we assumed that social goals would positively predict educational outcomes in these two cultures and that social goals would be able to predict learning outcomes over and above the variance accounted for by mastery and performance goals.

We hypothesised that social goals would be positive predictors of deep learning, motivational engagement, effort, and negative predictors of surface learning strategies. It should be noted that most of the previous research on achievement and social goals have relied on data drawn from one culture (see Bernardo & Ismail, 2010; Liem & Nie, 2008 for exceptions). Albeit common, an inherent weakness of such studies would be the possibility that the findings reported are not generalizable across cultures. A better approach is to simultaneously test the same variables across different cultures which canprovide stronger evidence for the nomological network associated with social goals.

It is important to note that we only investigated approach forms of goals in this study. PI Theory as currently operationalized focuses only on the approach forms of goals (Maehr & McInerney, 2004). Moreover, social goals (as defined in PI theory) being relative newcomers to goal research do not as yet have an avoidance dimension.

Avoidant types of goals have been shown to function in a more ambiguous manner in collectivist cultures. Although performance avoidance and mastery

avoidance goals are usually associated with maladaptive outcomes in Western contexts, they can also be associated with positive outcomes in collectivist settings (Elliot, Chirkov, Kim, & Sheldon, 2001; Hulleman et al., 2010). Since the main aim of our research was to investigate the effects of social goals (defined in an approach manner as it is in PI theory) relative to mastery and performance goals, we limit our investigation to the approach forms of goals.

The current study

The aim of the present research was to examine the potential role of social goals in influencing different educational outcomes including learning strategies, motivational engagement, and effort in HK and in the Philippines. These school outcomes have been shown to be important in quality learning and have also been well-researched in the achievement goal literature albeit their associations with social goals are not yet well known.

In this study we used the three forms of approach goals (mastery, performance, and social) as predictors. We entered mastery and performance goals in block one because they are more well-researched in the literature. We also we wanted to examine whether social goals could predict additional variance in the learning outcomes across the two cultures after controlling for both mastery and performance goals.

We hypothesized that mastery and performance goals would be positive predictors of deep learning, motivational engagement, and effort and negative predictors of surface learning based on our review of past empirical findings.We hypothesized that social goals would be able to predict additional variance in the various learning outcomes given their salience in collectivist cultures and that they

would be positive predictors of deep learning, motivational engagement, and effort. We also hypothesized that social goals would be negative predictors of surface learning.

Methodology

Participants. Respondents included 87[1] Filipino students from the Philippines (41 males, 46 females) and 158 Chinese students from Hong Kong (108 males, 50 females) studying in local secondary schools. The average age was 15. 9 years for the Filipinos and 15.5 years for Chinese.

Measures. The Mastery Goal (e.g. "I am most motivated when I am becoming better at my work."), Performance Goal (e.g. "I am most motivated when I am doing better then others."), and Social Goal (e.g. "I am most motivated when I work with others.") subscales of the General Achievement Goal Orientation Scale (GAGOS; McInerney, Marsh, & Yeung, 2003) were used to measure students' mastery, performance, and social goals respectively.

The GAGOS was designed to ask students directly about their perceived motivational experience rather than inferring a type of motivation from the items which is the case in most scales such as the Inventory of School Motivation (ISM; McInerney & Ali, 2006) or the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1993). GAGOS specifically identifies a particular type of motivation (mastery, performance, and social) and asks participants how much they endorse it, hence the stem of "I am most motivated when…" The GAGOS has been shown to be valid in previous research using both within- and between-network approaches to construct validation (McInerney, Marsh, & Yeung, 2003).

In terms of school outcomes, we used the Deep Learning Strategies subscale (e.g. "I try to relate what I learn in one subject to what I have learned in other subjects.") and the Surface Learning Strategies subscale (e.g. "In most subjects I try to do enough just to make sure I pass, and no more.") of the Learning Process Questionnaire (LPQ; Biggs, 1992) to measure students' deep and surface learning. For motivational engagement, we used the Global Motivation (e.g. "I feel motivated most of the time at school.") subscale of GAGOS, which measures students' subjective perception of how motivated they are in school. To measure effort expended in schoolwork, we used the Effort subscale of the Inventory of School Motivation (ISM; McInerney & Ali, 2006) (e.g. "I don't mind working a long time at schoolwork that I find interesting.").

The HK students received the Chinese versions of the questionnaires, while the Filipino students received the English versions. These questionnaires have been previously validated in these two contexts and have been shown to have good construct validity (see King, Ganotice, & Watkins, 2012; Watkins et al., 2002, 2003).

Statistical analyses. We began by conducting a CFA to see whether the hypothesized three-factor structure of GAGOS (mastery, performance, and social) was tenable for the Hong Kong Chinese and Filipino students[2]. AMOS 16 (Arbuckle, 2007) was used. Researchers have suggested that there should be around five cases per parameter that is freely estimated (Bentler & Chou, 1987; Byrne, 2010). Because of our small sample size, parceling was used. It involves aggregating two to three items together as one parcel indicator (Little, Shahar, Cunningham, & Widaman, 2002). Thus, in the CFAs conducted, all the latent constructs were measured by three parcels. The use of parceling is deemed to be suitable when sample sizes are small

because it lessens the model complexity through the reduction of the number of parameters that are freely estimated.

Hierarchical regression analyses were then employed to address the main research aims. We entered mastery and performance goals at Step 1 because they are the most commonly-studied goals. Social goals were entered at Step 2 because we wanted to examine whether social goals predicted additional variance in the outcomes of interest even after controlling for the effects of mastery and performance goals. If social goals could not explain a significant amount of variance beyond that accounted for by mastery and performance goals then the more parsimonious mastery-performance dichotomy would suffice. However, if social goals could predict a significant amount of variance beyond that accounted for by mastery and performance goals, then it would provide stronger support for the need to include social goals in motivation research. Note that we did not test for possible mediation effects among the goals given that mastery, performance, and social goals are deemed to have independent effects on outcomes. In line, with previous achievement goal research we only tested for main effects.

Results

Confirmatory factor analysis

In conducting the CFA for GAGOS, we posited a three-factor model (mastery, performance, social) with the three factors allowed to correlate freely with each other. Results supported the proposed three factor model both for the Hong Kong and the Filipino students. SRMR and RMSEA were below .08 and CFI and TLI values were above .90 which all indicated acceptable fit (Byrne, 2010; MacCallum, Browne, & Suguwara, 1996). See Table 2[3].

Insert Table 2 about here.

We also conducted another CFA for the dependent variables in the study. The dependent variables were deep learning, surface learning, motivational engagement, and effort. A four factor model with the four latent constructs allowed to freely correlate with each other was tested. Results also indicated a good fit to the data for both the Hong Kong and Filipino students (See Table 2).

Descriptive statistics and internal consistencies

Table 3 shows the descriptive statistics and Cronbach's alpha reliabilities for the scales used in this study. Most of the scales had acceptable psychometric properties[4]. However, the surface strategies scale had reliabilities that were lower than ideal. The low reliability of the surface strategy scale is not confined to the present research but has also been found in previous studies. For example, Biggs, Kember, and Leung (2001) only obtained a reliability of .57 for this scale among Chinese students, while Phan and Deo (2007) obtained a reliability of .53 among South Pacific students. Studies conducted among Filipino students have also obtained low Cronbach's alpha reliabilities for the surface strategies subscale. Bernardo (2003) obtained a Cronbach's alpha of .66, while Zhang and Bernardo (2000) obtained a Cronbach's alpha of .48. Researchers may consider modifying the items of this scale in future studies to increase its internal consistency.

Insert Table 3 about here

Relationships among the variables

Table 4 shows the correlations among the different variables.

Insert Table 4 about here

To examine the association between social goals and different school outcomes, hierarchical regression analyses were employed. We entered the oft-

examined mastery and performance goals at Step 1. At Step 2, we included social goals into the equation. (See Table 5).

Insert Table 5 about here

Results showed that social goals predicted additional variance in all the adaptive school outcomes examined for both cultures. Even after controlling for mastery and performance goals, social goals positively predicted deep learning, motivational engagement, and effort. Social goals were not significant predictors of surface learning in both contexts. In predicting deep learning, social goals predicted an additional 2.4% and 5.8% of the variance for the Chinese and Filipino groups respectively. For motivational engagement, social goals predicted an additional 8% and 8.7% of the variance, while it predicted an additional 4.2% and 6.7% of the variance for effort for the Chinese and Filipino groups respectively.

Although the R^2 for mastery and performance goals were larger, social goals also predicted a significant amount of variance even after controlling for the effects of mastery and performance goals. A look at the sizes of the regression coefficients would show that mastery goals were the most powerful predictors of most of the learning outcomes followed by social goals. Performance goals were mostly non-significant predictors of the various learning outcomes across both the Chinese and Filipino contexts.

Discussion

The present study was designed as an exploratory investigation into the relationships among mastery goals, performance goals, social goals, and other school outcomes in two collectivist cultures. Results confirmed most of our hypotheses. Mastery goals were positive predictors of learning outcomes across the two contexts. Social goals were also able to predict a significant amount of variance even after controlling for the impact of mastery and performance goals. However, contrary to our hypothesis, the pursuit of performance goals did not significantly predict most of the educational outcomes examined.

Social goals

Social goals positively predicted deep learning, motivational engagement, and effort for both cultures. In the Philippines, social goals also negatively predicted surface learning. These results provide empirical support to the claim that social goals are important in motivating students in collectivist cultures. Although such arguments have been frequently made in the past, the empirical research backing up this has been variable and fragmented. This study presents stronger evidence through the inclusion of two collectivist yet socio-culturally diverse societies (e.g., Confucian Chinese and Catholic Filipino). Previous research on social goals has mostly confined their investigations to a single culture (e.g., Bernardo, 2008; Chang & Wong, 2008; Leondari & Gonida, 2007; Nelson & DeBacker, 2008). A possible limitation of such studies is that results may not be generalizable to other contexts. The inclusion of two cultures in a single study can partly address this shortcoming.

Our results showed that reducing students' goals to mastery and performance is inadequate. Researchers have acknowledged that students live in a multi-goal environment and that mastery and performance goals are just some of the many goals

that students can pursue (Boekaerts 2009). However, the majority of studies in the school motivation literature still focus exclusively on mastery and performance goals. Social goals, albeit important have mostly been neglected. This seems to be an important shortcoming given that results of this study showed that social goals are also associated with beneficial outcomes.

The use of PI theory as the framework in this study is a considerable advantage. As mentioned before, there have been previous studies on how social goals influence achievement-related behavior (e.g., Church & Katigbak, 1992; Chang & Wong, 2008; Yu & Yang, 1994). However, in most of these studies different researchers used different definitions and measures of social goals. This makes it difficult to form generalizations about social goals given the gallimaufry of definitions and operationalizations in the literature. This study partly addresses these limitations by housing the research within a more solid theoretical framework, i.e. PI Theory, which has been shown to be useful paradigm for studying motivation in cross-cultural settings (see Zusho & Clayton, 2010 for a review). For social goal research to advance, researchers need to form a consensus as to how to best define and operationalize the construct. Defining social goals in line with PI Theory may be a viable option for researchers interested in studying the social goal construct.

Our results showed that students who pursued social goals were at a considerable advantage. This finding adds to the extant literature on the positive impact of social goals on learning (e.g., Dowson & McInerney, 2001, 2003). Students who pursue social goals are more likely to feel that they belong in school (Wentzel, 2009). They have meaningful relationships with others as reflected in their desire to be with their friends and to help out their friends. There is a rich literature indicating that students who have a high sense of relatedness with others have more optimal

learning outcomes (Wentzel, 2009). As Martin and Dowson (2009, p. 330) noted, "Relatedness is an important self-system process…it has an energizing function on the self, working through the activation of positive affect. This intrapersonal energy, gained from interpersonal relationships, provides a primary pathway toward motivated engagement…"

A complementary perspective is provided by the need to belong hypothesis which states that "human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (Baumeister & Leary, 1995, p. 497). Students who pursue social goals are more likely to have their belongingness needs fulfilled compared to those who distance themselves from their peers. Students who feel that they belong experience more positive emotions which are then thought "to drive students' achievement behaviors, including their responses to challenge, self-regulation, participation, and strategy use" (Martin & Dowson, 2009, p. 330).

Another possible reason for the adaptiveness of social goals was that our study was conducted in collectivist cultures. It is possible that culture can moderate the relationship of social goals to other constructs in the nomological network (Tanaka & Yamauchi, 2004; Tao and Hong, 2000; Urdan, 2004). Urdan and Maehr (1995) suggested that the meaning of social goals in different cultures may vary. For example, they speculated that in collectivist cultures, social goals may represent an internalized form of goal. However, in individualistic cultures, social goals may be considered more extrinsic and thus may lead to more negative outcomes. Future research which can include both individualist and collectivist cultures in a single study would be needed to provide a more stringent test of the assumption that social goals are more adaptive in collectivist cultures.

Mastery and performance goals

Mastery goals emerged as consistent positive predictors of adaptive learning outcomes in both HK and the Philippines. They were associated with deep learning, motivational engagement, and effort. A look at the regression coefficients would show that a mastery goal was the strongest predictor of most of the learning outcomes examined followed by social goals. The strong predictive value of the mastery goal is consistent with previous research which has documented its numerous benefits (Elliot, 2005; Hulleman et al., 2010). That social goals emerged as the second most salient positive predictor of adaptive learning outcomes is also worth noting given the lack of research on this construct. Previous research has mostly juxtaposed the consequences of mastery vs. performance goal pursuit with little regard for the correlates of other types of goals. This study shows that it is necessary to look beyond mastery and performance goals.

It was surprising to find that performance goals were not significant predictors of most of the school outcomes in the two cultures. This has important implications for achievement goal research. It might be necessary for future researchers to examine other types of goals such as social goals which may have greater predictive value than performance goals (see Brophy, 2005 for a similar argument). Although performance goals exhibited positive correlations with adaptive learning outcomes such as motivational engagement and effort in HK, it did not emerge as a significant predictor in the full regression equation in the HK sample suggesting that social goals are more important. In the Philippines, performance goals were positive predictors of surface learning, which is considered maladaptive. They were not significant predictors of deep learning, motivational engagement, and effort.

The correlations associated with performance goals were also different in Hong Kong and the Philippines. In Hong Kong, performance goals were positively correlated to motivational engagement and effort. However, in the Philippines, performance goals were positively correlated to surface learning and had no significant correlations with the other more adaptive educational outcomes (i.e. deep learning, motivational engagement, and effort).

The differences in these patterns of correlations could be attributed to the different learning environments in the two cultures. Hong Kong has a very competitive educational environment (Watkins, 2009; Watkins & Biggs, 1996). As such, the pursuit of performance goals in such contexts may be positive because of the educational affordances. For example, King, McInerney, and Watkins (2012a) has shown that performance goals are predictors of adaptive learning outcomes in Chinese cultures but not necessarily in other cultures where competitive practices are less common. Harackiwicz et al. (2002) also claimed that performance goals, especially the approach dimension may be more adaptive in contexts where competition is intense or highly visible, which is the case with Hong Kong (Watkins & Biggs, 1996). In the Philippines, almost everyone can get into university and there are no nation-wide examinations that students have to pass in order to go to university. The educational environment in the Philippines is not as competitive as that of Hong Kong (Bernardo & Ismail, 2010). This may be a reason why performance goals were not associated with positive learning outcomes in the Philippines.

Another interesting finding was the positive relationship between achievement and social goals. For both HK and the Philippines, social goals were positively related to mastery goals. This is important because there is a lack of research on how social goals are related to the more commonly-examined achievement goals. Mastery goals

and social goals may go hand-in-hand in motivating students from collectivist cultures (e.g. Bernardo, 2008; Chang, Wong, & Teo, 2000; Yu & Yang, 1996).

Limitations and Directions for Future Research

Our study has a number of limitations. First, because the design is correlational, it does not reveal causal connections. Second, we only examined the effects of approach goals. It would be interesting in future studies to examine how avoidant forms of goals (e.g. performance-avoidance, mastery-avoidance, and social-avoidance) would influence educational outcomes. As currently conceptualized, PI Theory has not yet included the avoidance forms of goals (Maehr & McInerney, 2004; McInerney & Liem, 2009). Future research may be conducted to see whether the addition of avoidance forms of goals within the PI framework could provide substantial theoretical yields. Moreover, our small sample size also precluded the addition of other predictors. Future research with larger sample sizes can investigate how both approach and avoidance forms of mastery, performance, and social goals impact learning. Third, our measure of social goals in this study was limited to the definition of social goals in PI theory. As such, items mostly referred to social solidarity goals. There are other types and alternative definitions of social goals which may also be salient in collectivist cultures but which we did not include in this study (e.g., Bernardo, Salanga, & Aguas, 2008; Chang & Wong, 2008). Fourth, in line with the exploratory nature of this study, we were only able to sample participants from two collectivist cultures. Future studies could widen the range of cultures examined by including both individualistic and collectivist cultures. Pancultural studies (e.g., Marsh & Hau, 2003, 2004) would eventually be needed to determine the importance and impact of social goals across a broader range of cultures. Fifth, our sample size especially in the Philippines was relatively small. Future research which have bigger

sample sizes incorporating students from different year levels would be needed to make stronger claims. Sixth, some of the scales used in this study had reliabilities that were somewhat low. Future research can reconsider the suitability of the translations for some of the scales.

References

Arbuckle, J. L. (2007). *Amos 16 user's guide*. Chicago: SPSS

Austin, J. T., & Vancouver, J. B. (1996). Goal constructs in psychology: Structure, process, and content. *Psychological Bulletin, 120,* 338–375.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497–529.

Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods and Research, 16,* 78-117.

Bernardo, A. B. I. (2003). Approaches to learning and academic achievement of Filipino students. *Journal of Genetic Psychology, 164,* 101-114.

Bernardo, A. B. I. (2008). Individual and social dimensions of Filipino students' achievement goals. *International Journal of Psychology, 43,* 886-891.

Bernardo, A. B. I. & Ismail, R. (2010). Social perceptions of achieving students and achievement goals of students in Malaysia and the Philippines. *Social Psychology of Education, 13,* 385-407.

Bernardo, A.B.I., Salanga, G.C., & Aguas, K.M. (2008). Filipino adolescent students' conceptions of learning goals. In O. Tan, D.M. McInerney, A.D. Liem, & A.G. Tan (Eds.), *What the West can learn from the East: Asian perspectives on the psychology of learning and motivation* (pp. 169-190). Greenwich, CT: Information Age Publishing.

Biggs, J.B. (1992). *Why and how do Hong Kong students learn? Using the Learning and Study Process Questionnaires*. Education Paper No. 14, Faculty of Education, University of Hong Kong.

Biggs, J. B., Kember, D., & Leung, D. (2004). The revised two-factor Study Process Questionnaire: R-SPQ-2F. *British Journal of Educational Psychology, 71,* 133-149.

Brophy, J. (2005). Goal theorists should move on from performance goals. *Educational Psychologist, 40,* 167–176.

Byrne, B.M. (2010). *Structural equation modelling with AMOS: Basic concepts, applications, and programming*, *2*nd *ed.* New York: Routledge.

Campbell, H. L., Barry, C. L., Joe, J. N., & Finney, S. J. (2008). Configural, metric, and scalar invariance of the modified Achievement Goal Questionnaire across African American and White university students. *Educational and Psychological Measurement, 68*, 988-1007.

Chang, W.C., Wong, W.K., & Teo, G. (2000). The socially-oriented and individually-oriented achievement motivation of Singaporean Chinese students. *Journal of Psychology in Chinese Societies, 1,* 39-63.

Chang, W. C., & Wong, K. (2008). Socially-oriented achievement goals of Chinese university students in Singapore: Structure and relationships with achievement motives, goals and affective outcomes. *International Journal of Psychology, 43,* 880-895.

Cheng, R. (2005). *Effects of social goals on student achievement motivation: The role of self-construal.* (Unpublished doctoral dissertation). The University of Hong Kong, Hong Kong.

Dekker, S., & Fischer, R. (2008). Cultural differences in academic motivation goals: A meta-analysis across 13 societies. *The Journal of Educational Research, 102,* 99-110.

Dowson, M., & McInerney, D.M. (2001). Psychological parameters of students'

    social and work avoidance goals: A qualitative investigation. *Journal of*

    Educational Psychology, 93, 35-42.

Dowson, M., & McInerney, D.M. (2003). What do students say about their

    motivational goals? Towards a more complex and dynamic perspective on

    student motivation. *Contemporary Educational Psychology, 28,* 91-113.

Dowson, M., & McInerney, D. M. (2004). The development and validation of the

    Goal Orientation and Learning Strategies Survey (GOALS-S). *Educational*

    and Psychological Measurement, 64, 290-310.

Dweck, C.S., & Leggett, E.L. (1988). A social-cognitive approach to motivation and

    personality. *Psychological Review, 95,* 256-273.

Eccles, J. S., Wigfield, A., & Schiefele, U. (1998). Motivation to succeed. In W.

    Damon & N. Eisenberg (Eds.). *Handbook of child psychology* (pp. 1017-1095).

    New York: Wiley.

Elliot, A. (2005). A conceptual history of the achievement goal construct. In A.J.

    Elliot & C.S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 52-

    72). New York: Guilford Press.

Elliot, A. (2008). The goal construct in psychology. In J.Y. Shah & W.L. Gardner

    (Eds.), *Handbook of motivation science* (pp. 235-250). New York: Guilford.

Elliot, A.J., Chirkov, V.I., Kim, Y., & Sheldon, K.M. (2001). A cross-cultural

    analysis of avoidance (relative to approach) personal goals. *Psychological*

    Science, 12, 505-510.

Elliot, A. J., & Moller, A. C. (2003). Performance-approach goals: Good or bad forms

    of regulation*? International Journal of Educational Research, 39,* 339–356.

Harackiewicz, J. M., Barron, K. E., Pintrich, P. R., Elliot, A. J., & Thrash,

T. M. (2002). Revision of achievement goal theory: Necessary and illuminating. *Journal of Educational Psychology, 94,* 638–645.

Harackiewicz, J. M., Barron, K. E., Tauer, J. M., Carter, S. M., & Elliot, A. J. (2000). Short-term and long-term consequences of achievement goals: Predicting interest and performance over time. *Journal of Educational Psychology, 92*, 316–330.

Heckhausen, H. (1991). *Motivation and action.* Berlin: Springer-Verlag.

Hofestede, G. (1980). *Culture's consequences: International differences in work-related values.* Beverly Hills, CA: Sage.

Hofestede, G. (1984). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations, 2nd ed.* Thousand Oaks, CA: Sage.

Hui, C.H. (1988). Measurement of individualism-collectivism. *Journal of Research in Personality, 22,* 17-36.

Hulleman, C.S., Schrager, S.M., Bodmann, S.W., & Harackiewicz, J.M. (2010). A meta-analytic review of achievement goal measures: Different labels for the same constructs or different constructs with similar labels? *Psychological Bulletin, 136,* 422-449.

Kaplan, A., & Middleton, M. J. (2002). Should childhood be a journey or a race? Response to Harackiewicz et al. (2002). *Journal of Educational Psychology, 94,* 646–648.

Karabenick, S. A. (2003). Seeking help in large college classes: A person-centered approach. *Contemporary Educational Psychology, 28,* 37–58

King, R. B., Ganotice, F. A., & McInerney, D. M. (2012). Cross-cultural validation of

 the Sense of Self (SOS) Scale in Chinese and Filipino settings. *Child*

 Indicators Research, 5, 719-734.

King, R.B., Ganotice, F.A., & Watkins, D.A. (2012). Cross-cultural validity of the

 Inventory of School Motivation (ISM) in Chinese and Filipino samples. *Child*

 Indicators Research, 5, 135-153.

King, R. B., & McInerney, D. M. (2012). Including social goals in achievement

 motivation research: Examples from the Philippines. *Online Readings in*

 Psychology and Culture, Unit 5. Retrieved from

 http://scholarworks.gvsu.edu/orpc/vol5/iss3/4

King, R. B., McInerney, D. M., & Watkins, D. A. (2010). Can social goals enrich our

 understanding of students' motivational goals? *Journal of Psychology in*

 Chinese Societies, 10, 1-16.

King, R. B., McInerney, D. M., & Watkins, D. A. (2012a). Competitiveness is not that

 bad…at least in the East: Testing the hierarchical model of achievement

 motivation in the Asian setting. *International Journal of Intercultural*

 Relations, 36, 446-457.

King, R. B., McInerney, D. M., & Watkins, D. A. (2012b). Studying for the sake of

 others: The role of social goals on academic engagement. *Educational*

 Psychology, 32, 749-776.

King, R.B., & Watkins, D.A. (2012a). Cross-cultural validation of the five-factor

 structure of social goals. *Journal of Psychoeducational Assessment, 30,* 181-

 193.

King, R.B., & Watkins, D.A. (2012b). "Socializing" achievement goal theory: The case for social goals. *Psychological Studies, 57,* 112-116.

Kitayama, S., & Uchida, Y. (2004). Interdependent agency: An alternative system for action. In R. Sorrentine , D. Cohen, J.M. Olson, & P. Zanna (Eds.), *Culture and social behavior: The Ontario Symposium, vol. 10* (pp. 137-164). Mahwah, NJ: Erlbraum.

Lee, K.M. (2007). *The academic motivation of Hong Kong secondary school students: A developmental perspective* (Unpublished doctoral dissertation). The University of Hong Kong, Hong Kong.

Lemos, M. S. (1996). Students' and teachers' goals in the classroom. *Learning and Instruction, 6*, 151-171.

Leondari, A., & Gonida, E. (2007). Predicting academic self-handicapping in different age groups: The role of personal achievement goals and social goals. *British Journal of Educational Psychology, 77,* 595-611.

Liem, G.A.D., Martin, A.J., Colmar, A.L., & Porter, S. (2012). Sociocultural antecedents of academic motivation and achievement: Role of values and achievement motives in achievement goals and academic performance. *Asian Journal of Social Psychology, 15,* 1-13.

Liem, G.A.D., & Nie, N. (2008). Values, achievement goals, and individual-oriented and social-oriented achievement motivations among Chinese and Indonesian secondary school students. *International Journal of Psychology, 43,* 898-903.

Little, T.D., Cunningham, W.A., Shahar, G., & Widaman, K.F. (2002). To parcel or not to parcel: Exploring the question weighing the merits. *Structural Equation Modeling, 9,* 151–173.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1,* 130-149.

Maehr, M. & Braskamp, L. (1986). *The motivation factor: A theory of personal investment.* Lexington, Mass.: Lexington.

Maehr, M., & McInerney, D.M. (2004). Motivation as personal investment. In In D.M. McInerney & S. Van Etten (Eds.), *Sociocultural influences on motivation and learning, vol. 4: Big theories revisited* (pp. 61-90). Greenwich, CT: Information Age Publishing.

Mansfield, C.F. (2009). Managing multiple goals in real learning contexts. *International Journal of Educational Research, 48,* 286-298.

Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98,* 224-253.

Marsh, H. W., & Hau, K. T. (2003). Big-fish-little-pond effect on academic self-concept: A cross-cultural (26-country) test of the negative effects of academically selective schools. *American Psychologist, 58,* 364-376.

Marsh, H. W., & Hau, K. T. (2004). Explaining paradoxical relations between academic self-concepts and achievements: Cross-cultural generalizability of the internal/external frame of reference predictions across 26 countries. *Journal of Educational Psychology, 96,* 56-67.

Martin, A.J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research, 79,* 327-365.

McInerney, D. (2008). The motivational roles of cultural differences and cultural identity in self-regulated learning. In D. Schunk & B. Zimmerman (Eds.),

Motivation and self-Regulated learning: Theory, research, and applications
(pp. 369-400). New York: Lawrence Erlbaum.

McInerney, D., & Ali, J. (2006). Multidimensional and hierarchical assessment of
school motivation: Cross-cultural validation. *Educational Psychology, 26,*
717-734.

McInerney, D. M., & Liem, G. A. D. (2009). Achievement motivation in cross-
cultural context: Application of personal investment theory in educational
settings. In A. Kaplan, S. A. Karabenick, & E. De Groot (Eds.), *Culture, self,
and motivation: Essays in honor of Martin L. Maehr* (pp. 213-241).
Greenwich, CT: Information Age Publishing.

McInerney, D. M., Marsh, H. W., & Yeung, A. S. (2003) Toward a hierarchical
model of school motivation. *Journal of Applied Measurement, 4,* 335-357.

Mclnerney, D. M., Roche, L., Mclnerney, V., & Marsh, H. W. (1997). Cultural
perspectives on school motivation: The relevance and application of goal
theory. *American Educational Research Journal, 34,* 207-236.

Murayama, K., Zhou, M., & Nesbit, J. C. (2009). A cross-cultural examination of the
psychometric properties of responses to the Achievement Goal Questionnaire.
Educational and Psychological Measurement, 69, 266-286.

Nelson, R.M., & DeBacker, T.K. (2008). Achievement motivation in adolescents: The
role of peer climate and best friends. *Journal of Experimental Education, 76,*
170-189.

Phan, H. P., & Deo, B. (2007). The revised learning process questionnaire: A validation of a Western model of students' study approaches to the South Pacific context using confirmatory factor analysis. *British Journal of Educational Psychology, 77,* 719-739.

Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1993). Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire. *Educational and Psychological Measurement, 53,* 801-813.

Ryan, A. M., Hicks, L., & Midgley, C. (1997). Social goals, academic goals, and avoiding seeking help in the classroom. *Journal of Early Adolescence, 17*, 152-171.

Ryan, A.M., & Shim, S.O. (2006). Social achievement goals: The nature and consequences of different orientations toward social competence. *Personality and Social Psychology Bulletin, 26,* 419-435.

Senko, C., & Miles, K. M. (2008). Pursuing their own learning agenda: How mastery-oriented students' jeopardize their class performance. *Contemporary Educational Psychology, 33,* 561–583.

Tanaka, A. & Yamauchi, H. (2001). A model for achievement motives, goal orientations, intrinsic interest, and academic achievement. *Psychological Reports, 88,* 123-135.

Tang, C. (1996). Collaborative learning: The latent dimension in Chinese students' learning. In D. Watkins & J. Biggs, *The Chinese learner: Cultural, psychological and contextual influences*. (pp. 183-204). Hong Kong: Comparative Education Research Center, The University of Hong Kong.

Tang, C., & Biggs, J. B. (1996). How Hong Kong students cope with assessment. In D. Watkins, J. Biggs, *The Chinese learner: Cultural, psychological and contextual influences* (pp. 159-182). Hong Kong: Comparative Education Research Center, The University of Hong Kong.

Tao, Y.C. (2003). *Hong Kong Chinese students' learning motivation: The role of social versus individual-oriented achievement motivation.* (Unpublished doctoral dissertation). Hong Kong University of Science and Technology, Hong Kong.

Tao, V. & Hong, Y. Y. (2000). A meaning system approach to Chinese students' achievement goals. *Journal of Psychology in Chinese Societies, 1,* 13-38.

Urdan, T. (1994). *Extending goal theory: Examining social goals and multiple goal profiles.* (Unpublished doctoral dissertation). The University of Michigan, Ann Arbor.

Urdan, T. (2004). Predictors of academic self-handicapping and achievement: Examining achievement goals, classroom goal structures, and culture. *Journal of Educational Psychology, 96,* 251-264.

Urdan, T., & Maehr, M. L. (1995). Beyond a two-goal theory of motivation and achievement: A case for social goals. *Review of Educational Research, 65,* 213-243.

Volet, S. E., & Renshaw, P. D. (1996). Chinese students at an Australian university: Adaptability and continuity. In D. A. Watkins, & J. Biggs, *The Chinese learner: Cultural, psychological and contextual influences* (pp. 205}220). Hong Kong: Comparative Education Research Center, The University of Hong Kong.

Watkins, D. A. (2009). Motivation and competition in Hong Kong secondary schools: The students' perspective. In C. K. K. Chan & N. Rao (Eds.), Revisiting the Chinese learner: Changing contexts, changing education. Hong Kong: Comparative Education Research Center, The University of Hong Kong.

Watkins, D.A., & Biggs, J.B. (1996) (Eds). *The Chinese learner: Cultural, psychological and contextual influences.* Hong Kong: Comparative Education Research Center, The University of Hong Kong.

Watkins, D. A., McInerney, D.M., & Boholst, F. (2003). The reliability and validity of the Inventory of School Motivation: A Filipino investigation. *The Asia Pacific Education Researcher, 12,* 87-100.

Watkins, D., McInerney, D.M., & Lee, C. (2002). Assessing the school motivation of Hong Kong students. *Psychologia, 45,* 145-154.

Watkins, D., McInerney, D.M., Lee, C., Akande, A., & Regmi, M. (2002). Motivation and learning strategies. A cross-cultural perspective. In D. M. McInerney & S. Van Etten (Eds.), *Research on Sociocultural Influences on Motivation and Learning, vol. 2* (pp. 329-343). Greenwich, CT: Information Age.

Wentzel, K. R. (1996). Social goals and social relationships as motivators of school adjustment. In J. Juvonen & K. R. Wentzel (Eds.), *Social motivation: Understanding children's school adjustment* (pp. 226-247). New York: Cambridge University Press.

Wentzel, K.R. (1999). Social-motivational processes and interpersonal relationships: Implications for understanding students' academic success. *Journal of Educational Psychology, 91,* 76-97.

Wentzel, K. R. (2000). What is it that I'm trying to achieve? Classroom goals from a content perspective. *Contemporary Educational Psychology, 25,* 105-115.

Wentzel, K. R. (2009). Students' relationships with teachers as motivational contexts. In K. R. Wentzel, & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 301-322). New York: Routledge.

Wentzel, K. R., Donlan, A., & Morrison, D. (2012). Peer relationships and social-motivational processes. In A. M. Ryan, & G. W. Ladd (Eds.), *Peer relationships and adjustment at school* (pp. 79-108). Charlotte, NC: Information Age Publishing.

Wentzel, K.R. & Wigfield, A. (1998). Academic and social motivational influences on students' academic performance. *Educational Psychology Review, 10,* 155-175.

Wolters, C. A. (2004). Advancing achievement goal theory: Using goal structures and goal orientations to predict students' motivation, cognition, and achievement. *Journal of Educational Psychology, 96*, 236-250.

Wu, C.-H., & Chen, L. H. (2010). Examining dual meanings of items in the 2 x 2 Achievement Goal Questionnaires through MTMM modelling and MDS approach. *Educational and Psychological Measurement, 70*, 305-322.

Yu, A.B. (1996). Ultimate life concerns, self and Chinese achievement motivation. In M. Bond (Ed.), *Handbook of Chinese psychology* (pp. 227-246). Hong Kong: Oxford University Press.

Yu, A. B., & Yang, K. S. (1994). The nature of achievement motivation in collectivist societies. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and applications* (pp. 239–250). Thousand Oaks, CA: Sage.

Zhang, L. F., & Bernardo, A. B. I. (2000). Validity of the Learning Process

    Questionnaire with students of lower academic attainment. *Psychological*

    Reports, 87, 284-290.

Zusho, A., & Clayton, K. (2011). Culturalizing achievement goal theory and research.

    Educational Psychologist, 46, 239-260.

Notes

[1]Due to the small sample size for the Philippines, we consulted a statistical calculator to (http: // www.danielsoper.com /statcalc3/ calc.aspx?id=1) determine if our sample size was sufficient. There are three predictors in our regression equation (mastery, performance, and social). We assume that the effect size is .15 (moderate effect size according to Cohen) which is in line with most of the findings in school motivation research. Probability level was set at .05 and desired power level was set at .80 which is the default option. Results showed that the recommended sample size for such a study is 76. Our sample size of 87 is still within this range although we do acknowledge that much larger sample sizes should be utilized in future research.

[2]The GAGOS has similar item stems for most of the items beginning with the phrase, "I am most motivated when…" In such cases, correlating the errors is deemed acceptable. However, in our study, we saw no need to correlate the errors given that the fit indices were already good for the more parsimonious model with no correlated residuals. Moreover, correlating the errors would increase model complexity which is not ideal given our small sample size.

[3]MacCallum, Browne, and Sugawara (1996) claimed that RMSEA values of .01, .05, and .08 are indicators of excellent, good, and mediocre fit respectively. Based on these criteria, the RMSEA values in our current study indicate mediocre fit. However, the values we obtained were largely similar to previous research which has specifically focused on the measurement of achievement goals (e.g., Campbell, Barry, Joe, & Finney, 2008; Elliot & Murayama, 2008; Murayama, Zhou, & Nesbit, 2009;

Wolters, 2004; Wu & Chen, 2010) thus we deemed them to be acceptable for our purposes.

[4]In some of the scales used, items have been deleted when they substantially decreased the Cronbach's alpha of the instrument.

Tables

Table 1.

Goal definitions and sample items in Personal Investment Theory

Goal	Definition	Sample items
Mastery goal	The goal is to improve one's competence relative to self-set standards	I am most motivated when I am becoming better at my work.
Performance	The goal is to demonstrate superiority to others through normative comparisons	"I am most motivated when I am doing better then others."
Social	The goal is to enhance sense of belongingness with peers and to help others	"I am most motivated when I work with others."

Note: Sample items are taken from the General Achievement Goal Orientation Scale (GAGOS) developed by McInerney, Marsh, and Yeung (2003).

Table 2

Goodness of fit indices for the CFAs on the GAGOS and dependent variables

Model	$\chi 2$	df	$\chi 2/df$	p	SRMR	RMSEA	TLI	CFI
CFA for mastery, performance, social goals								
1. Three-factor goal model in Hong Kong	41.464	24	1.73	.015	.06	.07	.92	.95
2. Three-factor goal model in the Philippines	37.88	24	1.58	.036	.06	.08	.93	.96
CFAs for the dependent variables								
1. Four-factor model of learning strategies, engagement, and effort in Hong Kong	80.516	48	1.68	.002	.06	.07	.88	.92
2. Four-factor model of learning strategies, engagement, and effort in the Philippines	67.524	48	1.407	.033	.08	.07	.91	.94

Note: SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; TLI = Tucker-Lewis index; CFI = comparative fit index.

Table 3

Descriptive statistics and Cronbach's alpha reliabilities for the scales in HK and the

Philippines

	HK			Philippines		
	Mean	SD	Cronbach's alpha	Mean	SD	Cronbach's alpha
1. Mastery goals	3.91	.48	.67	3.91	.58	.72
2. Performance goals	3.13	.55	.74	3.03	.72	.84
3. Social goals	3.48	.63	.67	3.70	.62	.67
4. Deep learning	3.48	.54	.66	4.83	3.68	.63
5. Surface learning	2.91	.59	.56	4.50	3.24	.64
6. Motivational engagement	3.02	.62	.75	4.63	3.62	.71
7. Effort	3.67	.51	.70	5.00	3.96	.77

Table 4

Bivariate correlations among the variables

	2	3	4	5	6	7
1. Mastery goal	.379***	.441***	.336***	-.167*-	.383***	.603***
	.317***	.478***	.496***	-.044	.535**	.602***
2. Performance goal	---	.352***	.128	-.032	.274**	.251**
	---	.086	.149	.398***	.129	.168
3. Social goal		---	.284**	-.006	.443***	.449***
		---	.465***	-.070	.528***	.513***
4. Deep learning			---	-.281***	.325**	.545***
			---	-.110	.490***	.570***
5. Surface learning				---	-.166*	-.355***
				---	-.145	-.052
6. Motivational engagement					---	.550***
						.754***
7. Effort						---

Note: The first line is for correlations in HK, while the second line indicates

correlations in the Philippines. * $p < .05$; **$p < .01$; ***$p < .001$.

Table 5

Summary of the hierarchical regression for goals as predictors of school outcomes

	Deep learning		Surface learning		Motivational engagement		Effort	
	HK	Philippines	HK	Philippines	HK	Philippines	HK	Philippines
Step1								
Mastery goal	.339***	.490***	-.187*	-.166*	.335***	.582***	.592***	.610***
Performance goal	.002	-.028	.036	.452***	.152	-.035	.027	-.029
Step 2								
Mastery goal	.273**	.349**	-.215*	-.137	.215*	.408***	.509***	.463***
Performance goal	-.037	-.007	.019	.448***	.081	-.011	-.024	-.006
Social goal	.179*	.275*	.076	-.058	.325***	.340***	.234**	.294**
R^2 Change Step 1	.116***	.231***	.031	.181***	.175***	.326***	.364***	.361***
R^2 Change Step 2	.024*	.058**	.004	.003	.080***	.087**	.042**	.067***
Total R^2	.140*	.289*	.035	.183	.254***	.414**	.406**	.428**

Note: *$p<.05$, **$p<.01$, ***$p<.001$. Only standardized beta coefficients are shown.

Author/s:
King, RB;McInerney, DM;Watkins, DA

Title:
Examining the role of social goals in school: A study in two collectivist cultures

Date:
2013-12-01

Citation:
King, R. B., McInerney, D. M. & Watkins, D. A. (2013). Examining the role of social goals in school: A study in two collectivist cultures. EUROPEAN JOURNAL OF PSYCHOLOGY OF EDUCATION, 28 (4), pp.1505-1523. https://doi.org/10.1007/s10212-013-0179-0.

Persistent Link:
http://hdl.handle.net/11343/283062