

# Attribution and Motivation: A Cultural Study among Indonesian University Students

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## Abstract

Relationships between cultural factors (ethnicity and religiosity) and dimensions of students' attributions for their success and failure (locus of control, stability, personal control and external control), along with motivational goals (learning, performance approach, performance avoidance, and work avoidance), self-efficacy, intelligence beliefs, and academic performance were examined among 1,006 Indonesian university students. Students' stability attributions predicted their learning goals, whereas neither locus of control, personal, or external control attributions predicted any motivational goals. Self-efficacy predicted learning and performance approach goals, as well as performance avoidance goals. Students' intelligence beliefs did not show significant predictions. Ethnic importance predicted performance approach goals; whilst intrinsic religiosity predicted learning goals.

**Keywords:** Attribution, Motivational goals, Self-efficacy, Intelligence beliefs, Ethnicity, Religiosity

## 1. Introduction

Students' motivation is the driving force behind their choice of action to learn (Good & Brophy, 1990). Even among motivated students, the type of motivation can differ. One student might want to score well in order to look good in front of his/her peers, while another student might want to score well because s/he wants to know if s/he understands the subject well. In academic situations, achievement goals are well-known in relation to students' motivation with the notion that achievement situations can affect students' choices of goals (Dweck, 1986). There are many factors that can affect students' motivation, one of them is students' attributions, or the way they perceive the causes of their academic success and failure (Folmer, Cole, Sigal, Benbow, Satterwhite, Swygert, & Ciesla, 2007; Seegers, Van Putten, & Vermeer, 2004).

Additional factors that need to be taken into consideration in studying attribution and motivation are students' beliefs about their intelligence. When students believe that their intelligence is either fixed ("entity" belief) or that it can be developed ("incremental" belief; Dweck, 1986), this belief can affect the way they attribute the causes of their successes and failures. Self-efficacy is another important factor in learning settings which can affect academic performance (Pajares & Kanzler, 1995; Pintrich & DeGroot, 1990); attributing failure to stable and uncontrollable causes has been found to relate to low self-efficacy (Schunk, 1982).

Attribution, the way one perceives the causes of one's successes and failures, as part of one's cognitive make-up can be influenced by cultural background. Values that are transmitted by one's culture can motivate one to act in a certain way (Schwartz, 2006) and may determine an individual's attributional patterns (Choi, Nisbett, & Norenzayan, 1999; Morris & Peng, 1994). Within the Indonesian context, ethnicity and religiosity are highly salient. The issue of one's ethnicity can be quite complex. There are two main ethnic groups in Indonesia: Native Indonesians and Chinese Indonesians (the minority ethnic group). Native Indonesians may identify themselves more to their sub-ethnic groups such as Javanese, Balinese and others; while Chinese Indonesians may identify themselves as Totok or Babah (Ong, 2005; Suhandinata, 2009). Chinese Totok are Chinese Indonesians who do not have Native Indonesian ancestors within the family line, whereas Chinese Babah have Native Indonesian ancestors within the family line, but then inter-marry within their sub-ethnic group or with people of Chinese descent. Both Totok and

Babah regard themselves as of Chinese descent but each has a distinct culture (Ong, 2005). Within these two sub-ethnic groups, they may further identify themselves with their in-groups such as Khek, Tiociu for Totok, or Javenese Chinese for Babah who are more likely to identify themselves by their birthplace. There have been quite a few racial riots; in the recent big riot of 1998 Chinese Indonesians were victims of looting, killing, and mass raping of women (Blackburn, 2009; Coomaraswamy, 1999; Jusuf, Timbul, Gultom, & Frishka, 2008). The issue of ethnicity also permeates academic settings, where public university students are mostly Native Indonesians and private universities usually attract Chinese Indonesians.

The issue of religion cannot be taken lightly in Indonesia. Even today, on Indonesians' national identity card one has to declare one's religious affiliation (Islam, Christianity, Catholicism, Buddhism, Hinduism, Confucianism/Other belief). By 2007, there were 53 local districts that had Islamic faith-based regulations (Raillon, 2011). There have also been quite a few religious based riots in Indonesia, with conflicts between Muslims and non-Muslims in the spotlight although not exclusively (Beech, 2010; Lee, 2010; Sianipar, 2011). As these two cultural factors, ethnicity and religion, are important in the Indonesian context, students' racial/ethnic identity and religiosity could affect their attributions and motivations.

### *1.1 Achievement Goal Motivations*

Students' motivations depend on their self-perceptions, needs, competencies, and interests (Meece, Blumenfeld, & Hoyle, 1988). In academic settings, students' achievement goals will be an important motivational factor which will affect their approach to learning, and have been found to be significant predictors of cognitive, behavioural, and affective patterns in academic settings (Ames, 1984; Covington, 2000; Elliot & Dweck, 1998). Achievement goal theory is concerned with students' purposes and motives, which guide and direct their cognition and behaviour (Dweck, 1986). Achievement goal motivation refers to the desire to develop, attain, or demonstrate competence at an activity.

Achievement goal motivations can be classified into learning (or mastery) goals and performance (or ego) goals (Ames, 1992; Dweck & Leggett, 1988). Students who have a learning goal strive to develop their competence and task mastery. Learning goal orientations have been linked to positive outcomes such as high engagement in learning (Ames, 1992; Wolters, 2004), more active cognitive engagement (Meece, Blumenfeld, & Hoyle, 1988), higher interest in study (Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Senko & Harackiewicz, 2002), effort (Meece & Holt, 1993), persistence (Harackiewicz et al., 2002), and achievement (Liem & Nie, 2008).

Performance goals are further differentiated into performance approach and performance avoidance goals (Elliot, 1999; Elliot & Harackiewicz, 1996; Elliot & Thrash, 2001). Approach-based goals focus on success, and as such move toward it, whereas avoidance based goals focus on failure, and as such move away from it (Elliot & Church, 1997; Elliot & Harackiewicz, 1996). Students who have a performance approach goal want to perform well in order to demonstrate their competence, whereas students who have a performance avoidance goal try to protect themselves from the perception that they are not competent. Students with performance avoidance goals may even consciously not do some things in order to avoid looking bad in front of others. Both performance approach and performance avoidance goals have been found to predict surface processing such as facts memorisation, in contrast to deep processing which focuses on understanding material (Elliot, McGregor, & Gable, 1999; Greene & Miller, 1996; Harackiewicz, Barron, & Elliot, 1998). Even so, performance approach goals have more adaptive outcomes than performance avoidance goals, such as persistence, effort, and achievement (Elliot, McGregor, & Gable, 1999; Harackiewicz, Baron, Pintrich, & Thrash, 2002; Meece & Holt, 1993), due to the competitive nature of the goal itself, where students are motivated to outperform others. On the other hand, performance avoidance goals negatively predict examination performance and deep processing (Elliot, McGregor, & Gable, 1999), self-efficacy, affect (Smith, Sinclair, & Chapman, 2002), and achievement (Liem & Nie, 2008). Performance avoidance goals have also been found to be associated with the use of self-handicapping strategies (Urdu, 2004).

Another type of negative motivation is a work avoidance goal. These students use low- to no-effort when facing a task, minimising the effort involved, which limits their engagement in the learning process (Archer, 1994; Dowson & McInerney, 2001; Meece, Blumenfeld, & Hoyle, 1988; Meece & Holt, 1993). Work avoidance orientations are associated with laziness, boredom, inertia, and even anger (Dowson & McInerney, 2001) toward whomever is giving them demanding tasks. The reason why students have these feelings might be because they attach more importance to areas other than the classroom. Students who have a work avoidance goal may even feign incompetence to obtain their teachers' and friends' pity and get a "free pass" from the task or an easier task, or their friends may help them or let them copy their work. Work avoidance goals are negatively related to learning goals, and positively related to performance goals (not differentiated into approach and avoidance dimensions; Meece, Blumenfeld, & Hoyle, 1988).

The lack of effort from students with a work avoidance goal is not aimed at concealing a lack of ability (Archer, 1994), in contrast to performance avoidance students who may employ low-effort strategies in order to avoid looking incompetent.

### *1.2 Self-Efficacy and Beliefs about Intelligence*

Students' beliefs about their ability and intelligence can affect their choice, persistence, and performance (Bandura, 1977, 1986; Eccles, 2005; Wigfield & Eccles, 2000; Pajares & Miller, 1995). Self-efficacy is consistently positively correlated to learning and performance approach goals (Lee & Lee, 2001), and negatively to performance avoidance goals (Bong, 2001). Students' self-efficacy positively predicts performance outcomes in academic tasks (Pajares & Johnson, 1996; Pajares & Kranszler, 1995; Pajares & Valiante, 1997; Pintrich & DeGroot, 1990) and contributes to students' motivational beliefs (Zimmerman & Bandura, 1994).

Students' beliefs about intelligence also affect their motivation. Dweck proposed two theories of intelligence which students hold: the fixed or entity theory, and the incremental theory (Dweck, 1986, 2000). An entity theory of intelligence defines it as stable, global, and uncontrollable, whereas an incremental theory defines it as unstable and controllable (Dweck & Leggett, 1988; Vogler & Bakken, 2007). When students hold entity beliefs, they tend to be oriented more toward performance goals, whereas when students hold incremental beliefs they tend to orient more toward learning goals (Hong, Chiu, Dweck, Derrick, & Wan, 1999) corresponding with their belief that intelligence can be developed.

### *1.3 Attribution*

Attribution refers to the way one perceives the causes of one's own outcomes and those of others (Weiner, 1979, 1985, 1995). In academic settings, students make attributions about their performance. Weiner (1979) identified four causal attributions for academic success and failure: ability, effort, task difficulty, and luck. Weiner (1985) further classified these four reasons along three dimensions: locus of control, stability, and controllability. Locus of control relates to whether one perceives the causes of one's outcomes to reside within oneself (internal) or from someone/something else (external). Stability refers to whether the cause is considered stable (will always be there), or unstable (something that can change). Controllability refers to whether one perceives the causes as controllable or uncontrollable by oneself. For example, a student may attribute the causes of his/her failure to a lack of effort (internal, unstable, and controllable), or to the teacher being unfair (external, and uncontrollable). One's causal biases when interpreting success or failure have subsequent important implications for motivational states and achievement behaviours (Dweck, 1975; Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1972). Students who attribute the causes of their failure to a lack of effort are more likely to try to attain mastery. Individuals high in achievement motivation may continue to strive for a previously unattained goal, whereas individuals low in achievement motivation may cease their goal strivings if they anticipate continued failure following non-attainment of their goal (Weiner, 1972). Students' attributions may also affect their self-efficacy; those who attribute their failure to low effort have been found to hold higher expectations for future success (Stage, Muller, Kinzie, & Simmons, 1998).

### *1.4 Relations between Attributions, Motivation, Self-Efficacy, Theories of Intelligence, and Cultural Factors (Race and Religion)*

An experimental study which involved manipulation of effort followed by failure feedback with children aged 5-15 years, showed that the way the participants perceived their ability, or lack of it, was associated with an increase or decrease in their motivation (Folmer et al., 2008). Students with learning goals tended to attribute their failures to controllable factors (Dweck & Elliot, 1988). It was hypothesised that Indonesian students' attributions would predict their motivational goals, which in turn would predict their academic performance. Also, that students' theories of intelligence would predict their motivational goals and self-efficacy, and their self-efficacy would additionally predict their motivational goals.

Cultural differences have been found in the way people perceive motivation and effort. Chinese mothers attributed the causes of their children's failure more heavily to lack of effort in contrast to Caucasian American mothers, who distributed blame more evenly among lack of effort, ability, school and home training, and also to luck (Hess, Chang, & McDevitt, 1987). Another study found that American students attributed their academic achievement more often to their ability than did the Asian students (Yan & Gaier, 1994). Strong identification with one's ethnic group has been found to predict motivation, academic achievement, and academic self-concept (Oyserman, Harrison, & Bybee, 2001). As for the religion aspect, it can be fully integrated into cultural meanings and daily life such that it cannot be separated from the existence of culture itself (Shweder, 1990). One's religiosity, which refers to behaviours,

emotions, and thoughts that derive from beliefs about the sacred (Dedert, Studts, Weissbecker, Salmon, Banis & Septhon, 2004), can also affect one's attributions and motivational goals. The present study explored how racial/ethnic identity and religiosity, along with theories of intelligence, would affect motivational goals, attributions and self-efficacy, in the Indonesian context.

## 2. Method

### 2.1 Sample and Participants

The sample was 1,006 university students (43.7% male) from 3 public and 2 private universities in Indonesia. From the sample, 73.8% were Native Indonesians, 24.8% Chinese Indonesians, and 1.6% checked the "Other" box and described themselves as Eurasian, Indian descent, or did not give any description. Based on religious beliefs, 65.1% were Muslims, 17.1% were Christians, 10.5% were Catholics, 5.9% were Buddhists, 1.0% were Hindus, and 0.4% described their religious beliefs as "Other". There were fewer than 3% of Chinese Indonesian students at the public universities; the first contained 96.6% Native Indonesian and 2.7% Chinese Indonesian students; the second 96.7% Native Indonesians and 2.0% Chinese Indonesians; the third 97.2% Native Indonesians and 1.6% Chinese Indonesians. At the private universities, the proportion of Native Indonesians exceeded that for Chinese Indonesians at public universities: The first private university had 74.2% Chinese Indonesians and 24.0% Native Indonesians; the second 67.8% Chinese Indonesians and 28.7% Native Indonesians.

### 2.2 Procedure and Data Analysis

The survey was administered in the classroom in 2009, after mid-term examinations so mid-term scores could also be collected as a measure of prior performance. Final test and GPA scores were subsequently obtained from the administrative department of each university. To create subscale scores, component items were averaged (see Table 1 for descriptive statistics, subscale reliabilities and sample items). Multiple linear regression analyses ( $p < .01$ ) were conducted, first, with attribution variables, self-efficacy, intelligence beliefs, religiosity and racial/ethnic identity as independent variables and motivational goals as the dependent variables. Second, motivational goals and self-efficacy were independent variables and academic performance (final test and GPA scores) the dependent variables. Third, intelligence beliefs and attribution variables were the independent variables, and self-efficacy the dependent variable. The last model had intelligence beliefs, religiosity, and racial/ethnic identity as independent variables, and attribution variables as the dependent variables.

### 2.3 Instruments Attribution.

The 12-item (rated from 1 = the least likely to 9 = the most likely) Revised Causal Dimension Scale (McAuley, Duncan, & Russell, 1992) was used to measure the 3 dimensions of attribution; the scale further differentiated the control dimension into personal and external control subdimensions. There were 3 items for each dimension (locus of control, stability, personal control and external control). Based on exploratory factor analyses (EFA), one item from the locus of control dimension was dropped due to low loading, which increased the reliability (Cronbach's alphas) of the locus of control dimension from .64 to .69. The reliability coefficients for the other subscales were: stability .74; personal control .58; and external control .75.

### 2.4 Motivational achievement goals.

Students' learning ( $\alpha = .85$ ) and work avoidance goals ( $\alpha = .86$ ) were measured using a scale previously developed and used with university students in the U.S. (Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2008). Five performance approach items ( $\alpha = .89$ ) from the Patterns of Adaptive Learning Scales (PALS: Midgley, Maehr, Hruda, Anderman, Anderman, Freeman, Gheen, Kaplan, Kumar, Middleton, Nelson, Roeser, & Urdan, 2000) were used to measure students' performance approach as they were considered more aligned with the theoretical definition of performance approach goals. The performance avoidance goal had 2 items from Harackiewicz et al. (2008) and 4 from PALS with reliability coefficient of .83.

1) Self-efficacy. Students' self-efficacy was measured using a subscale from PALS which had 5 items ( $\alpha = .76$ ). As with motivational goals, the range of response options for this subscale was from 1 = not at all true of me to 7 = very true of me.

2) Theories of intelligence. Dweck's theories of intelligence scale was used to measure students' intelligence beliefs. It consists of 4 items rated from 1 to 7,  $\alpha = .79$ .

3) Racial/Ethnic identity. A racial/ethnic identity scale adapted from Peck, Brodish, Malanchuk, and Eccles (2008) was used. It had 4 items tapping private regard ( $\alpha = .69$ ), 3 for ethnic importance ( $\alpha = .79$ ), and 2 for social embeddedness ( $\alpha = .63$ ).

4) Religiosity. The Duke University Religion Index (DUREL; Koenig, Meador, & Parkerson, 1997) was used to measure students' religiosity. The 5 items in the questionnaire were modified so that they could be used for non-Christians as well since the questionnaire was developed based on Christian faith; for example the word "church" was replaced with the words "place of worship". Based on factor analysis, 2 items were factored together as religious behaviour ( $\alpha = .56$ ) and 3 retained their respective dimension of intrinsic religiosity ( $\alpha = .76$ ).

5) Academic performance. Students' academic performance was measured by their final-test and grade point average (GPA) scores. Final test scores were specific to the subject domain in which students were surveyed whereas GPA is based on average scores from all subjects undertaken in that semester.

### 3. Results

#### 3.1 *Attributions, Self-Efficacy, Intelligence Beliefs, Religiosity, Racial/Ethnic Identity, and Motivational Goals*

Only the stability attributional dimension had a significant effect on motivational goals, specifically, performance approach goals,  $\beta = .12$ ,  $R^2_{Adj} = .07$ ,  $F(12,993) = 7.75$ , over and above the effect of mid-term scores. Thus, students who perceived the causes of their success and failure to be stable were more likely to adopt a performance approach goal. Self-efficacy significantly impacted all motivational variables: learning goals,  $\beta = .47$ ,  $R^2_{Adj} = .27$ ,  $F(12,993) = 32.82$ ; performance approach goals,  $\beta = .11$ ,  $R^2_{Adj} = .07$ ,  $F(12, 993) = 7.75$ ; performance avoidance goals,  $\beta = .23$ ,  $R^2_{Adj} = .07$ ,  $F(12, 993) = 7.46$ ; and negatively impacted work avoidance goals,  $\beta = -.19$ ,  $R^2_{Adj} = .09$ ,  $F(12, 993) = 9.51$ .

Neither intelligence beliefs nor religious behaviour predicted motivational goals. The more students had intrinsic religious beliefs and applied their religious beliefs into their daily life, the more likely they were to hold learning goals,  $\beta = .09$ ,  $R^2_{Adj} = .27$ ,  $F(12, 993) = 32.82$ ; or performance approach goals  $\beta = .07$ ,  $R^2_{Adj} = .08$ ,  $F(12, 993) = 7.75$ ; and the less likely they were to hold work avoidance goals,  $\beta = -.12$ ,  $R^2_{Adj} = .09$ ,  $F(12, 993) = 9.51$ ; There were no significant associations with performance avoidance goals. Private regard and social embeddedness did not predict any motivational goals, but ethnic importance predicted performance approach goals,  $\beta = -.17$ ,  $R^2_{Adj} = .07$ ,  $F(12, 993) = 7.75$ . The more students considered their ethnic identity to be important, the less likely they were to hold performance approach goals.

#### 3.2 *Motivational Goals, Self-efficacy, and Academic Performance*

The regression analysis for motivational goals and final test scores showed that learning goals predicted final test score over and above the effects of mid-term score,  $\beta = .11$ ,  $R^2_{Adj} = .12$ ,  $F(7, 998) = 20.50$ ; no other goals had significant effects. For GPA, performance approach goals were the only significant predictor,  $\beta = .14$ ,  $R^2_{Adj} = .02$ ,  $F(7, 998) = 4.75$ . Self-efficacy had no significant effects on final test score or GPA.

#### 3.3 *Religiosity, Racial/Ethnic Identity, Intelligence Beliefs, and Attributions*

Incremental beliefs predicted internal locus of control,  $\beta = .18$ ,  $R^2_{Adj} = .05$ ,  $F(7, 998) = 9.63$ ; personal control,  $\beta = .27$ ,  $R^2_{Adj} = .12$ ,  $F(7, 998) = 20.54$ ; and external control,  $\beta = -.18$ ,  $R^2_{Adj} = .04$ ,  $F(7, 998) = 7.68$ ; but not stability attributions. Religiosity and racial/ethnic identity did not predict any attribution dimensions.

#### *Attributions, Intelligence Beliefs, and Self-Efficacy*

Neither locus of control nor stability attributions significantly predicted self-efficacy. Personal control,  $\beta = .14$ ,  $R^2_{Adj} = .13$ ,  $F(6, 999) = 25.07$ , and external control,  $\beta = -.14$ ,  $R^2_{Adj} = .13$ ,  $F(6, 999) = 25.07$  attributions significantly predicted self-efficacy. The more students perceived they had personal control over the causes of their success and failure, and the less they perceived external control, the more likely they were to have high self-efficacy. Incremental intelligence beliefs significantly and positively predicted self-efficacy,  $\beta = .21$ ,  $R^2_{Adj} = .13$ ,  $F(6, 999) = 25.07$ .

### 4. Discussion

#### 4.1 *Attributions, Motivational Goals, Intelligence Beliefs, Self-Efficacy, and Academic Performance*

Previous studies in Western contexts have shown that students' attributions can affect their motivation (Seeger et al., 2004; Weiner, 1995). Students who hold a learning goal orientation attribute the causes of their failures to effort, which is an internal and controllable attribution (Ames, 1992; Diener & Dweck, 1978). Previous studies with Chinese students in Hong Kong showed that 9th graders attributed the causes of their success and failure to internal causes (Ho, Salili, Biggs, & Hau, 1999). Previous research in the U.S. context (i.e. Ames, 1992; Pintrich, Marx, & Boyle, 1993) showed that mastery (learning) goal orientation related to internal control beliefs. That locus of control attributions in this study did not predict any motivational goals might be related to the measurement of locus of control attributions in this study. During the factor analysis stage, one item from the original scale was dropped due

to cross-loading with the personal control dimension, suggesting there may be underlying cultural factors in perceiving items of the Revised Causal Dimension Scale, which was developed and validated among American college students (McAuley, Duncan, & Russell, 1992).

However, in the present study, stability attributions predicted one motivational goal – that of performance approach. It is possible that the students in this study were referring to stable high ability (see Weiner, 1985), which could make one strive to be perceived as more competent. Another possibility could be linked to religiosity (intrinsic religiosity) which predicted motivational goals. Indonesian students may hold a fate attribution in regard to their academic achievement, as the statement “it is fated” or “it is destined” or “God willing” is not uncommon in Indonesia, and thus students might perceive their achievement as being something stable due to the action of fate. Indonesians believe that pious or religious people will be favoured by God, but human efforts can also be perceived to be an act of service or faith to the Divine, for example teaching and learning are considered to be noble acts referred to as “ibadah” by Muslims. Thus, students may believe that as long as they are religious their academic achievement would remain positive as a reward, pahala, or karma. If religious students perceived their fate to be under the control of the Divine, it could explain why intrinsic religiosity was a more significant predictor of motivational goals than personal or external control attributions.

A plausible explanation for why neither personal, external, nor locus of control attributions predicted motivational goals in contrast to previous U.S. studies (Ames, 1994; Blumenfeld, 1992; Diener & Dweck, 1980) could be a lack of understanding of the concepts in the attribution scale. After briefing the participants, there were questions about the attribution items, such as what was meant by “reflect an aspect of yourself or the situation” (locus of control dimension), “manageable or not manageable by you” (personal control dimension), “under the power of other people” (external control dimension), and “attribution”, reflecting these kinds of concepts were not familiar to participants. This might not mean that they did not understand the questions, but that they were not used to consciously thinking in those terms in regard to their academic achievements.

Alternatively, as different cultures have been found to differ in their attributions (Choi, Nisbett, & Norenzayan, 1999; Maddux & Yuki, 2006), it is possible that social goal orientations affected Indonesian (collectivistic culture) students’ achievement attributions and motivational goals. Social orientations such as preserving one’s cultural identity or pleasing one’s parents (Wentzel, 1991) may co-exist with learning and performance goal orientations. A study of Taiwanese students showed that in pursuit of personal goals, students attributed success to internal factors and failure to external factors; whereas in pursuit of social expectation goals, they attributed failure to a lack of effort (Chen, Wang, Wei, Fwu, & Hwang, 2009). Perhaps differentiating personal from social expectation goals would show a clearer relationship between attributions and motivational goals in the Indonesian context.

Similar to previous studies in Western cultures (Elliot, McGregor, & Gable, 1999; Harackiewicz et al., 2005; Pintrich, 2003), learning goals and performance approach goals predicted academic performance in this present study. Intriguingly, they predicted different academic performances. Learning goals led to higher domain-specific final test scores and performance approach goals were linked to higher across-domain GPA scores. As final test scores were specific to one particular subject, students holding learning goals in that domain, due to their interest in the material being studied, would be likely to spend more time and effort studying that material. On the other hand, such students might not have invested equally high effort in all the other subjects which comprised their GPA. In contrast, students who held performance approach goals, and were motivated to show their competence compared to others, would be more likely to invest similar effort into all subjects which comprised their GPA.

Although previous studies showed intelligence beliefs predicted motivational goals (Hong et al., 1999; Rhodewalt, 1994), when put together with attributional and cultural predictors (i.e. racial/ethnic identity and religiosity), they did not predict motivational goals. It seems for the Indonesian context, cultural factors were more significant predictors. Students with high intrinsic religiosity were more likely to hold learning or performance approach goals and less likely to hold work avoidance goals; whereas students who considered their ethnic identity to be important were less likely to hold performance approach goals.

#### *4.2 Race/Ethnicity and Religion*

Having a positive attitude toward one’s ethnicity has been found to predict not only high academic self-concept, but also achievement (Witherspoon, Speight, & Thomas, 1997). In this study, the ethnic importance dimension negatively predicted performance approach goals, and thereby GPA. It is possible that there might be a social bias in the completion of the racial/ethnic identity scale. Due to the tense relationships between the two ethnic groups, the Indonesian participants might have tried not to be perceived to favour their own ethnic group as the topic of race/ethnicity is considered taboo/sensitive in Indonesia. This possibility might have been reinforced by the

administrator of the surveys being of the Chinese Indonesian ethnic group. As religion is linked to one's ethnicity within the Indonesian context, this could also account for why racial/ethnic identity did not predict many motivational goals. It is better to be perceived as a religious person, presumably with godly and righteous values, than to be perceived to have prejudices toward people from other ethnicities. Participants might thus underplay their racial/ethnic identity in favour of religiosity.

It was quite unexpected that neither religiosity nor racial/ethnic identity predicted any of students' attributions (Choi, Nisbett, & Norenzayan, 1999; Maddux & Yuki, 2006). Previous studies which identified cultural differences in attributions usually have contrasted Western and Eastern cultures, whereas this study was conducted within the one Indonesian culture which could generate similarities in attributions. Considering the complexities of ethnic and religious affiliations within the Indonesian context, disentangling religious affiliations and ethnicity could be one way to further identifying the cultural patterns underlying attributions (Norenzayan & Lee, 2010). Intelligence beliefs were a more significant predictor for students' attributions; students who held incremental beliefs were more likely to attribute the causes of their success and failure to internal and controllable factors. That incremental beliefs predicted internal and personal control attributions is not surprising as students who hold incremental beliefs believe that intelligence is malleable and controllable (Dweck & Leggett, 1988).

As in previous studies in Western contexts (Elliot & Church, 1997; Zimmerman, 1994), students' self-efficacy in the present study related to motivational goals. High self-efficacy students were more likely to adopt learning or performance approach goals, and less likely to adopt a work avoidance goal. But, unlike previous studies (Bong, 2001; Elliot & Church, 1997), self-efficacy also positively predicted performance avoidance goals. Cultural factors appear likely to account for this. In particular, the cultural value of saving face may explain that although students might believe they have the ability to do certain tasks, their personal preference may still be to not want to be perceived as less capable than others, in case they do not succeed to their aspired level. A previous study also showed Indonesian students to score higher on performance avoidance goals than others (e.g. Europe, Vietnam, South America, and Japan; Woodrow & Chapman, 2002).

## 5. Conclusion

The present study has given valuable insights to students' attribution, motivation, and academic performance within the Indonesian context. Due to the seeming unfamiliarity of some of the attribution concepts in the scales, an alternative measurement may be more useful in the Indonesian context. It may be better to measure types rather than dimensions of attributions, such as ability, effort, task difficulty, and luck, as well as adding culturally specific attributions such as the Divine. Motivational achievement goals seem to cut across cultures including Indonesian and seemed more familiar to students than the attribution concepts, although separating personal and social goal orientations may be helpful to further explore cultural differences. Self-efficacy seemed to be a somewhat universal concept and predictor of motivational goals, similar to previous studies in Western cultures. Interestingly, in this study, self-efficacy also predicted performance avoidance goals. Religiosity and racial/ethnic identity were better predictors of students' motivational goals than their intelligence beliefs. Thus, unique cultural variables influenced students' attribution and motivation within the Indonesian context, highlighting the need to take these into further account.

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Table 1. Subscale Descriptive Statistics, Reliabilities and Sample Items

Subscale	<i>M</i>	<i>SD</i>	No. items	$\alpha$	Sample Item (where applicable)
<b>Attribution:</b>					
Locus of control	4.93	1.18	2	.69	that reflects an aspect of yourself?
Stability	3.43	1.21	3	.74	permanent?
Personal control	4.52	.99	3	.58	manageable by you?
External control	2.60	1.19	3	.75	over which others have control?
<b>Motivation:</b>					
Learning	4.85	1.01	7	.85	Mastering the material in this class is important to me.
Performance approach	3.22	1.24	5	.89	I want to do better than other students in this class.
Performance avoidance	4.11	1.11	6	.83	I just want to avoid getting a low grade in this class.
Work avoidance	2.51	1.58	3	.86	I want to do as little work as possible in this class.
Self-efficacy	4.26	1.02	5	.76	I can do almost all the work in class if I don't give up.
Theories of intelligence	4.16	1.04	4	.79	To be honest, you cannot really change how intelligent you are.
<b>Religiosity:</b>					
Intrinsic	3.56	.42	3	.76	In my life, I experience the Presence of the Divine (i.e. God).
Religious behaviour	3.53	.84	2	.56	How often do you attend a place of (Organisational and private) worship or other religious meetings? How often do you spend in private religious activities, such as prayer, meditation, or reading the Holy Book?
<b>Race/ethnic identity:</b>					
Private regard	1.62	.61	4	.69	I feel good about my racial/ethnic identity.
Ethnic importance	2.62	.87	3	.79	Being Native/Chinese Indonesian is an important reflection of who I am
Social embeddedness	2.23	.69	2	.63	I have a close community of friends because of my race/ethnicity.
<b>Academic Performance:</b>					
Mid-term test score	68.25	14.02			
Final test score	71.24	13.51			
GPA	3.12	.15			