

Goal Orientations, Locus of Control and Academic Achievement in Prospective Teachers: An Individual Differences Perspective

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Abstract

The aim of this study is to investigate the role of the prospective teachers' locus of control in goal orientations and of both orientations in academic achievement. The participants were 270 undergraduate students studying in different majors at the Faculty of Education in Pamukkale University. Goal Orientations and Locus of Control Scales were used to gather the data. Pearson Correlation and regression analyses were performed to analyze the data. Results showed that mastery goal orientation was positively and avoidant goal orientation was negatively related with locus of control and academic achievement. A positive relationship was found between locus of control and academic achievement. In the study regression analyses indicated that mastery and avoidance goal orientations were predicted by locus of control and academic achievement was predicted by goal orientations and locus of control together. Implications of the findings were discussed and suggestions were given for the educators.

Key Words

Goal Orientations, Locus of Control, Academic Achievement, Prospective Teachers.

Prospective teacher's behaviours depend on many crucial characteristics which could be defined as the individual-difference variables or conceptualized as the sources of personal differences.

Some of these relate to the individual directly. Among them "goal orientations" and "locus of control" constructs take an important role. Because as literature revealed, both orientations have meaningful relationships with the affective, cognitive, and behavioral reactions of students in and out of school settings and academic achievement (Chubb, Fertman & Ross, 1997; Diener & Dweck, 1978; Dweck & Leggett, 1988; Eliot & Church, 1997; Nelson & Mathias, 1995; Rose & Medway, 1981; Seifert, 1995). Therefore, the "goal orientations" and "locus of control" constructs have received considerable attention in psychological and educational researches. However, there is little research documenting the relationships between the prospective

teachers' goal and locus of control orientations and the two constructs' role in academic achievement together. Additionally, the need to understand the nature of the relations between various theories and thus to explain the differences in the quality of students' behaviours is obvious. Following this view, the primary goal of the present study was to examine the role of the prospective teachers' locus of control in their goal orientations and of both orientations in academic achievement.

Theories of motivation focus on the importance of motivational characteristics in order to predict the students' learning behaviors and performances. In that respect, expectancy/value theorists (Eccles, 1987; Eccles & Wigfield, 1995; Meece, Wigfield & Eccles, 1990; Wigfield, 1994; Wigfield & Eccles, 1992, 2000) propose that individual's expectancies and the value given to the task determine the achievement behavior. Consistent with this view, social-cognitive theory of motivation (Dweck, 1986; Dweck & Leggett, 1988) postulates that there is a relationship between a person's goal orientations and his/her responses in academic settings. Within this social-cognitive framework, achievement goal theory has developed in motivational researches.

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The primary focus of goal orientation theory is on how students think about themselves, their tasks and their performance (Dweck & Leggett, 1988).

According to the goal theory, the motives that the students used to complete their tasks are called as goal orientations (Ames, 1992; Dweck, 1986). Recently, many researchers have adopted a goal orientation framework and labeled different types of goals such as learning versus performance (Elliot & Dweck, 1988; Miller, Behrens, Greene & Newman, 1993); task versus ego (Fox, Goudes, Biddle, Duda & Armstrong, 1994); mastery versus performance (Ames & Archer, 1988); and task mastery, ego-social, and work-avoidant (Meece, Blumenfeld & Hoyle, 1988; Meece & Holt, 1993; Nolen & Haladyna, 1990).

Among them the mastery (also called learning) and the performance (also called ego-social) goal orientations are dominant. Students with *mastery goal orientation* try to acquire knowledge to learn and increase their competence for self development. These students believe that effort is the cause of success or failure. They indicate a greater preference for challenge (Seifert, 1995), use especially deep strategy processing (Ho & Hau, 2008; Meece et al., 1988; Nolen, 1988; Pintrich & De Groot, 1990; Seifert, 1995; Somuncuoğlu & Yıldırım, 1999) make more positive self statements (Diner & Dweck, 1978), report more positive and less negative affect, take responsibility for success (Seifert, 1995), show positive behaviours towards learning, have high academic achievement level and self efficacy perception (Anderman & Young, 1994; Brdar, Rijavec & Loncaric, 2006; Chan, 2008; Fenollar, Roma'n & Cuestas, 2007; Elliot, McGregor & Gable, 1999; Grant & Dweck, 2003; Hsieh, Sullivan & Guerra, 2007; Linnenbrink, 2005; Middleton & Midgley, 1997; Midgley & Urdan, 1995; Pajares, Britner & Valiante, 2000). Students with *performance goal orientation* are interested in demonstrating their ability and emphasizing high grades to enhance their ego. They believe that ability is the cause of success or failure. They use less sophisticated strategies (Nolen, 1988; Seifert, 1995; Somuncuoğlu & Yıldırım, 1999), make more negative self-statements, and attribute success to uncontrollable factors (Seifert, 1995). Many researches have documented that being mastery oriented is related with more adaptive patterns of behaviors than is an orientation to performance goal (Ames & Archer, 1988; Dweck & Leggett, 1988).

Additionally, the literature studies have demonstrated that performance goal can be classified according

to the approach-avoidance tendency. *Performance approach goal* is oriented toward obtaining favourable and *performance avoidance goal* is oriented toward avoiding unfavourable judgments of competence (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Middleton & Midgley, 1997). Performance approach goal has been related to both positive outcomes such as high competence, high performance and maladaptive outcomes such as surface learning strategies (Midgley, Middleton & Kaplan, 2001). On the other hand, avoidance goal has been related to maladaptive outcomes such as insufficient strategies, negative affect and low performance (Elliot, 1999; Elliot & Church, 1997; Elliott & McGregor, 1999; Elliot & McGregor, 2001; Middleton & Midgley, 1997; Midgley & Urdan, 2001; Pintrich, 1999; Skaalvik, 1997). However, recently, researchers have found that performance-approach goals are related to more positive outcomes such as use of cognitive strategies (Pintrich, 2000; Wolters, Yu & Pintrich, 1996), course achievement (Church, Elliot & Gable, 2001; Elliot & Church, 1997; Harackiewicz, Barron, Tauer, Carter & Elliot, 2000) and are not correlated with use of surface learning strategies (Archer, 1994). Therefore performance-approach goal should not be considered as maladaptive for learning. These studies show a contradiction about the research findings on the positive effects of performance-approach goal. But according to Midgley et al. (2001) performance-approach goal seems to be beneficial for certain types of individuals (e.g., boys, older students) and under certain types of conditions (e.g., competitive environments, situations where mastery goals are also present). Also Archer (1994), Greene and Miller (1996) found that students can use both learning and performance approach goals together without showing the negative behaviours related with the performance approach goal. For that reason Midgley, Middleton, Gheen and Kumar (2002) conceptualized both the mastery and the performance goals as "*approach*" goals (as cited in., Gutman, 2005). Because students try to approach the task rather than to avoid it when they use both goal orientations.

All these studies have indicated that students adopt different goals in different achievement situations and they lead to different cognitive engagements (Ablard & Lipschultz, 1998; Pintrich, 2000). In other words, people differ in the way they approach and perceive the situations, the achievement and themselves. For that reason some people place importance on learning whereas others prefer to get high performance while some others try to avoid unfavourable judgments (Dweck & Leggett, 1988).

As literature shows that the achievement goal orientation is an important determinant of student behaviours in educational settings, researchers must focus on the classroom environment and teacher related variables that affect the development of mastery goal orientation (Ames & Ames, 1981; Kaplan & Maehr, 1999; Lau & Lee, 2008; Tapola & Niemivirta, 2008; Urdan, Midgley, & Anderman, 1998).

Consequently achievement goal theory proposes that students' level of motivation and behaviors can be understood by considering the reasons or purposes they use while doing their academic works (Ames, 1992; Dweck & Legget, 1988). For that reason, to examine the role of the prospective teachers' locus of control in their goal orientations and of both orientations in academic achievement will help the educators to learn the differences in the learning behaviours of the students.

Similarly, locus of control as developed by Rotter (1966) based on the social-cognitive theory, is a well-known cognitive-behavioral psychological attribute used to describe students' perceptions of how much they can control the circumstances of life, specifically their learning behaviors and achievement. As a personality variable locus of control is conceptualized on an internal-external dimension. It is defined as the extent to which an individual believes life events are the results of his/her actions (*internal control*) or luck, chance, fate and powerful others (*external control*). Besides this, the literature showed that the behavior of internals and externals can differ according to the situations. As stated by Purkey (1970) and Lefcourt (1980) the development of locus of control begins in early childhood by the influences coming from the child-parent interactions and child-teacher interactions (as cited in., Hawkes, 1991 and Lawrence, 1998).

In the studies, locus of control based on the social-cognitive theory was examined in relation to self-motivation, social maturity and independence (Nelson & Mathias, 1995), reflective thinking (Norton, 1997), self esteem (Abouserie, 1994; Chubb et al., 1997), taking responsibility, personal control (Lefcourt, 1976; as cited in., Chubb et al., 1997), anxiety (Nunn, 1988; Pigge & Marso, 1990), adjustment (Nunn, 1987), and stress (Abouserie, 1994).

Lefcourt (1982; as cited in., Lorenz, 2000) and Spector (1982) both determined that locus of control may be an important personality variable in understanding teachers and their roles in the

classroom. Based on this understanding, teacher locus of control was examined in relation to motivation (Anderson, Hattie & Hamilton, 2005; Czubaj, 1996), job attitudes (Cheng, 1994), stress (Parkay, Greenwood, Olejnik & Proller, 1988), self efficacy (Alderman, 1990; Anderson et al., 2005; Senior, 2002), student's perception of classroom (Sadowski, Blackwell & Willard, 1986; Sadowski & Woodward, 1983), academic achievement (Kalechstein & Nowicki, 1997; Nelson & Mathias, 1995; Rose & Medway, 1981; Smith, 1997) teacher's teaching performance (Sadowski et al., 1986; Sadowski & Woodward, 1983), anxiety, attitude and confidence (Pigge & Marso, 1990; Smith, 1997), developmentally appropriate classroom management styles (Bredenkamp & Coppler, 1997; as cited in., Lorenz, 2000).

The results of all of these studies showed clear and consistent relationships between internal locus of control and positive characteristics and outcomes.

Literature revealed that the learners with internal locus of control are more effective in acquiring and using required knowledge than externals (Lefcourt, 1976; as cited in., Chubb et al., 1997). For that reason it could be said that internal learners will perceive the tasks less uncomfortable and thus try to learn more effectively. Therefore, it could be argued that because locus of control is a personality trait, personality may affect the motivational orientations.

Additionally, the research studies conducted with a goal and locus of control orientations perspectives have indicated that the motivational orientations and the locus of control tendencies are important factors influencing intellectual functioning and learning behaviours of students (Levin & Levin, 1991). In other words, it means that the individuals' beliefs about the control of their life is an important factor for learning and development (Shapiro, Schwartz, & Astin, 1996). Therefore, the first goal of the present study is to examine the role of the prospective teachers' locus of control in their preferred goal orientations. The second and the equally important goal of this study is to explore the role of both locus of control and goal orientations in prospective teachers' academic achievement. Consistent with these goals, two basic research questions shaped the framework for this research:

1. Are there any significant relationships between the prospective teachers' achievement goal orientations, locus of control and academic achievement? If so, how are they related?

2. Does locus of control predict goal orientations significantly?

3. Do prospective teachers' goal orientations and locus of control together contribute to their academic achievement?

The contribution of the studies explored briefly above to the clarification of the student's learning behaviour is obvious. On the basis of the available evidence, specifically the following hypotheses were generated for the research:

1. Possibly, there will be close relationships between goal orientations, locus of control and academic achievement. Specifically, locus of control will be positively related with mastery goal and negatively with avoidance goal orientations. In other words, prospective teachers with internal locus of control tendencies, will prefer mastery goal orientation and prospective teachers with external locus of control tendencies, will prefer avoidance goal orientation. Academic achievement will correlate positively with mastery goal orientation and internal locus of control and negatively with avoidance goal orientation and external locus of control.

2. Locus of control will predict goal orientations significantly. Specifically, internal locus of control will predict mastery and external locus of control will predict avoidance goal orientations. In general, it is expected that personality traits will predict motivational orientations.

3. Certain goal orientations especially mastery goal and internal locus of control will contribute to academic achievement positively.

Method

Research Design

While conducting the research which aimed to investigate the role of the prospective teachers' locus of control in goal orientations and of both orientations in academic achievement, the descriptive survey model was used.

Participants

A total number of 270 third (104) and fourth (166) grade student teachers enrolled in the department of elementary education in Pamukkale University, Denizli, participated to the study. The sample included 78 male and 192 female whose ages ranged from 19 to 33 years old.

Measures

Goal Orientations Inventory: Goal Orientations Inventory is a self-report test including 30 items with three subtests, each containing ten statements which assess individuals' orientations on learning, performance approach and performance avoidance goals which were developed by Middleton & Midgley (1997) and appropriated to Turkish by Özgüngör (2006). For each item, the participants were asked to rate themselves on a 5 point Likert-type scale ranging from 5 indicating that the item described them extremely well to 1 indicating that the item did not describe them at all.

Locus of Control Scale for Teachers: The Locus of Control Scale for Teachers is a self report test including 20 items developed by Sadowski, Taylor, Woodward, Peacher and Martin (1982) based on Rotter's theoretical foundations on locus of control to identify locus of control in teachers. For each item, the participants were asked to rate themselves on a 5 point Likert-type scale ranging from 5 indicating that they agree completely with the item to 1 indicating that they never agree with the item.

In this study, first the Locus of Control Scale for Teachers was translated to Turkish by the researcher and controlled and approved by three other experts in the field of educational psychology. Then, the item-scale correlations were calculated to determine the suitability of the items. Using these results, the lowest item-scale correlations were identified and items 9 ($r = .10$) and 11 ($r = .05$) were omitted from the scale based on the criterion given by Aiken (1976; as cited in., Öner, 1997) and Özdamar (1997). Thus, the remaining item-scale correlations ranged from .22 to .60 and 18 items constituted the new form of the scale. The internal consistency of the scale was carried out on the data of remained 18 items. The alpha coefficients for the scale was found as .82, suggesting adequate reliability of the instrument. The factor structure of the Locus of Control Scale for Teachers was computed by principal-components analysis using a varimax rotation. The factor analysis yielded five factors with eigenvalues larger than 1 and they accounted for 56% of the variance. According to Lord (1980) if the level of the difference between the first factor's eigenvalue and that of the second is high and the second factor's eigenvalue is not more different than that of the remainings, then the scale could be accepted as a one just with one factor (as cited in., Gelbal, 1994). According to the results the scale could be accepted with only one factor as its origi-

nal. The results also indicated that the items 2, 3, 13 and 17 did not load on the first factor. For that reason, these items were omitted from the scale and the remaining 14 items constituted the new short form of the scale.

Procedure

First the gathered data were used to analyze the reliability and validity of the Locus of Control Scale for Teachers. Then the bivariate correlation coefficients and regression analysis were performed to test the hypotheses conducted to answer the questions in the study.

Results and Discussion

Results showed that mastery goal orientation were positively related with locus of control ($r = .35$; $p < .01$) and academic achievement ($r = .15$; $p < .05$) and avoidance goal orientation were negatively related with locus of control ($r = -.21$; $p < .01$) and academic achievement ($r = -.19$; $p < .01$). A positive relationship was found between locus of control and academic achievement ($r = .14$; $p < .05$). According to these results, it could be said that as the level of internal locus of control and mastery goal orientation increase the level of academic achievement increases, as the level of avoidance goal orientation increases the level of academic achievement decreases, as the level of internal locus of control increases the level of mastery goal orientation increases and finally as the level of locus of control decreases (as the level of external locus of control increases) the level of avoidance goal orientation increases.

In the study, regression analyses indicated that mastery ($R^2 (.12)$, $F = 37.938$, $p < .001$) and avoidance ($R^2 (.4)$, $F = 12.251$, $p < .01$) goal orientations were predicted by locus of control and academic achievement was predicted by goal orientations and locus of control all together ($R^2 (.6)$, $F = 3.837$, $p < .01$). These results show that high level of locus of control (being internally controlled = internal locus of control) plays a role in mastery and low level of locus of control (being externally controlled = external locus of control) plays a role in avoidance goal orientations significantly. These show that personality traits have a predictive power in motivational orientations. The obtained results also mean that mastery goal orientation and internal locus of control contribute to the academic achievement of

prospective teachers positively. In other words, it can be said that achievement is a function of both the students' "will" and "their perceptions that the life events are the results of their actions".

According to the results obtained in this study, it could be suggested that the teachers should stimulate their students to develop and use internal locus of control and mastery goal orientation to increase their academic performance and to enhance internal locus of control for being good mastery learners.

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