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A Proposed Model of Motivational Influences on Academic Achievement with Flow as the Mediator

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Abstract

Motivation is a combined force that influences students to work hard and achieve academically. However, there seem to be a missing link between motivation and academic achievement - learning engagement may be the answer. The aim of this paper is to propose the need for an integration of constructs from six different motivational theories into one motivational path, with flow as the mediator, in order to explain academic achievement better. When these motivational forces work together effectively, they are predicted to influence students to be in a state of flow – engagement in learning tasks. It is also predicted that being in a state of flow will contribute to high academic performance.

Keywords: Motivational forces flow; Academic achievement; Future time reference; Achievement need; Learning goals; Self-efficacy; Self-determination; Expectancy values

1. Introduction

What makes some students work hard and invest long hours to achieve in academic subjects? Why do they persist in face of hardship and difficulties simply to perform excellently in school? Why do other students seem uninterested in school, do not show much excitement about performing well, and do not seem bothered if they fail subjects? The answer to such questions is embedded in the theories of motivation.

Motivation has been identified as one of the most powerful determinants of students' success or failure in school (Hidi & Harackiewicz, 2000). Motivation is defined as one's wish and will to behave in a directed way which in turn initiates a series of actions to engage in particular activities (Pintrich & Schunk, 1996). Motivation in academic refers to the reasons students want to attend, engage in, and put effort in learning and achieving in school (Beck, 2004). In terms of behaviors, academic motivation results in increased student's involvement in activities related to learning (Connell & Wellborn, 1991).

Studies have found numerous factors that motivate students to schools including perceptions of classroom climate, perceived ability, perceived instrumentality of instruction, and achievement goals as predictors of engagement and effort in school (Hadre et. al., 2007).

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Student motivation in academic results from their perceptions of the classroom, and sometimes from their interactions with teachers, peers and others in school (Hardré, 2003; Pintrich & Schunk, 1996). Many factors influence student's motivation to learn including interest in the subject matter, perception of the usefulness of studying, the desire to achieve, perception of one's ability, and persistence to achieve.

Experts, parents and teachers have been interested in discovering the important forces influencing students' achievement in academic. Most people believe that motivation plays a significant role in determining whether students achieve or fail. Each student has different level of motivation, as well as different personal and social factors that affect his or her motivation. It is imperative for educators and parents alike to understand better the interaction of the various aspects contributing to students' motivation in order to ensure the academic success of school children.

Most studies to date have examined the relationship between one or two components of motivation and academic achievement. However, recent trends have challenged the views that academic motivation is one dimensional and instead attempted to understand the relationship between motivation and academic outcomes from multidimensional aspects (Dowson & Mcinerney, 2001). Research has suggested that motivation does not act individually but may be interrelated, thus contributing to a wholesome effect on the motivation for students to achieve academically.

Different psychological perspectives explain motivation in different ways. Which one is true, or more true than the other? It is logical to assume that no one particular type of motivation influence a person at any one time. Several components of motivation will be at work influencing an individual to become energetic and moves towards a goal. The social cognitive model of motivation sees motivation as a dynamic, multifaceted phenomenon (Pintrich, 2000). They do not categorize students as either "motivated" or "not motivated". They believe that students can be motivated in multiple ways, influenced by various factors and ways (Linnenbrink & Pintrich, 2002).

This paper advocates a model involving six components of motivation which will be treated as a group of forces that drive students to work hard. Future time reference, achievement need, learning goals, self-efficacy, self-determination, and expectancy values are predicted to work together to influence students to success. In contrasts, if any of these components is lacking, or several of them are low, then students will have low motivation and not be driven to success.

However, motivational force alone is not adequately strong to ensure students perform well in their school works. Between motivation and achievement, students must get deeply engrossed, concentrated and focused on their learning task in order to perform better in tests and school appraisals. It also helps if students find enjoyment in what they do. This posits the view that engagement, or being in a state of flow, can be achieved when the six motivational forces work together effectively. Flow theory suggests that students can enter a flow state when they are fully absorbed in their learning activity during which they lose their sense of time and have feelings of great satisfaction (Pajares, 2001). Flow was found to be higher in high-achieving students than in low-achieving students. Thus it is not far-fetched to propose that students must be in a state of flow if they want to achieve higher.

2. Intrinsic and Extrinsic Forces

Looking at the students and determining the personal push or pull that force students to school, learning and academic success may be more beneficial to all parties concerned. Be it external motivation or internal motivation, both will help to attract students to learning and act as a shield from the lure of negative activities. Extrinsic motivation refers to the pull by external factors such as rewards, punishment, and peer pressures; whereas intrinsic motivation refers to the push from within that results from internal factors such interests and enjoyment (Deci & Ryan, 1985). Studies have shown that students who have intrinsic motivation persist longer, win more challenges, and achieve more in their academic endeavors than those with extrinsic motivation. In contrast, students with extrinsic motivation tend to focus on receiving rewards, getting higher grades, and winning peer students' approval since their behaviors are controlled by external rather than internal factors (Ames, 1992; Deci & Ryan, 1985; Dweck & Leggett, 1988; Nicholls, 1984).

However, recent research indicates that intrinsic and extrinsic motivation orientations are not mutually exclusive but may work together with various motivational determinants (Dowson & McInerney, 2001; Hwang, 2000). Highly intrinsically motivated students can also be extrinsic in terms of future goal orientations (Husman & Lens, 1999). A study also established that students having extrinsic motivation combined with positive future goals will enhance their present value and intrinsic motivation (Van Calster, Lens, & Nuttin, 1987). Students who relate extrinsic factors to positive future goals were more engaged in school and received better grades (Rowley, 2000).

Based on the recent views on the importance of intrinsic and extrinsic motives, it is suggested that the combined motivational forces must include both kinds of motivation. When each of the six motivational theories included here are defined and described, it can be delineated that each variable consists of intrinsic and extrinsic aspects.

3. Six Motivational Forces

The identification of motivational forces that promote academic achievement is imperative, because there are students who do not perform well academically, many show disinterest in learning and in completing school education, and a small number even drop out of school. External forms of academic interventions are not enough to keep a large number of intellectually capable students interested in school and motivated to complete school. With a comprehensive picture of what motivate students in school, teachers may provide solutions to help curb rates of school failure and dropout by addressing broader contexts that include personal, social, emotional, and intellectual development.

Although previous studies provided the conceptual clarification of diverse motivational theories and constructs, they were often studied and explained individually. Admittedly, several studies have focused on the interrelations between two or three motivational aspects, yet the picture is still not comprehensive. To understand the drives and pushes that influence students to academic excellence, a more comprehensive and integrated picture must be examined. The path of motivation needs to be charted in order to better understand the ups and downs of motivation. The motivational path proposed here is an integration of six motivational theories which have been shown to be strongly related to academic performance.

3.1 Future Time Preference

Probably the most determining forces of motivation is having a long-term future goal that strongly motivates individuals to work hard and persist in the present. This future time reference theory posits that some students see the connections between what they do in present and what they will gain in future (Simons et.al, 2004). Therefore, striving students understand how their present task-engagement is meaningfully related to future goals that they desire. Thus they appreciate the fact that their present behavior will highly probably ensure the attainment of their future goals. Personal future goals are important for present motivation and learning (Simons, Dewitte, & Lens, 2000). In fact, several researchers have suggested that perceiving a current task as instrumental in attaining one's future goals enhances not only student motivation but also subsequent performance (Vansteenkiste et al., 2004; Wigfield & Eccles, 2002).

Research has shown a link among the perceived instrumentality of a task and course achievement (Greene et al., 2004; Miller & Brickman, 2004). Based on the links established between future time reference and positive learning outcomes, this study hypothesizes that students with strong future goals will have higher grades in schools compared to students with weak future goals.

3.2 Achievement Need

The notion that people possess a relatively stable disposition toward engaging in achievement-oriented activities has existed since at least the 1930s (Murray, 1938). It is argued that the need for achievement is particularly important because it is an unconscious motive that drives individuals to perform well or to improve their performance (McClelland, 1985). It is relatively stable and subsequently is considered as part of an individual's personality. Many studies have found a strong positive correlation between need for achievement and goal attainment (Hollenbeck et al. 1989; Slocum et al., 2002).

Furthermore, the need for achievement is a function of expectations, which are based on personal standards of excellence. One's performance is compared to one's expectations such that meeting or exceeding these expectations produces positive affect, whereas not meeting these expectations produces negative affect (McClelland, 1985). Individuals with a high need for achievement have a tendency to demonstrate their ability in overcoming difficult tasks whilst maintaining consistently high standards (McClelland & Watson, 1973; Slocum et al., 2002). Such individuals consistently look for quantitative feedback on their performance in order to learn from their mistakes (Boyatzis & Kolb, 1995).

Students with high achievement typically achieve more during their lives than people with low high achievement. Those with low achievement may choose tasks with very easy difficulty, so they have a decreased chance of failure, or they may choose a difficult task, so a failure would not be embarrassing. It is hypothesized that students with high achievement need will have higher grades in schools compared to students with lower achievement need.

3.3 Learning Goal

Another dimension of motivation included in the proposed path model is the learning goal orientation, which emphasizes two types of goal orientations that motivate students to perform well academically (Ames, 1992). Students that pursue mastery goals want to acquire new skills, improve their competence, increase knowledge and understanding through putting efforts during learning. Those who adopt performance goals prefer to get favorable judgments towards one's competence, wanting to show that they have good ability and avoid signs of failure as well as outdo other students. Mastery oriented students have been shown to possess desirable characteristics that promotes academic achievements more than performance-oriented students (Smith, Duda, Allen, & Hall, 2002). In view of the significant role of both mastery and performance goals on academic achievement in school, this study proposes that students with high mastery and high performance goals will have higher grades in schools compared to students with low mastery and performance goals.

3.4 Self efficacy

Self-efficacy or one's beliefs about own capability to succeed is another motivation theory studied in this research. Perceived efficacy determines how much effort a student is willing to put into an activity and how long he will persist in face of obstacles (Walkerr et. al, 2006). When students have low self-efficacy, they believe they are not good enough to succeed in a task, so why try in the first place, or why put extra effort in something that they 'know' they will fail at? It is suggested that belief in one's capacity is a factor that influence academic achievement and it can be likened to mastery motivation and intrinsic motivation (Bandura, 1997). The greater the expectation for success, the more motivational energy a person will exert in initiating and persisting toward success in the face of a learning challenge. Studies have found that self-efficacy is a predictor of grades and performance (Pietsch, Walker, & Chapman, 2003; Schunk, 1989, 1991). Thus, this study predicts that students with high self-efficacy will achieve higher grades compared to students with low self-efficacy.

3.5 Expectancy value

Yet another force of motivation that is seen as influential is the expectancy values that students hold. This theory sees motivation as a product of two main forces: the students' individual expectation of reaching a goal, and the value of that goal to him or her. If the value is high for success, and probability of success is also high, then students will be motivated to engage in learning behaviors. In contrast, when value of success is not high and students do not think they are able to succeed, then students will not work hard to achieve (Eccles & Wigfield, 2001). In short, students will engage in a task that they highly values, and less effort in a task that they do not value. Thus, students will put more effort in studying if they put high value in academic achievement, relating its usefulness to future usage. Students who believe they are capable of mastering their schoolwork typically have positive expectations for success and have positive values for academic tasks, which contribute to high motivation and achievement (Martin & Dowson, 2009; Nicholls et al., 1989; Arbreton & Blumenfield, 1997; Eccles, 1983). This study foresees that students with high expectancy of achieving and put high value on achievement will achieve higher grades compared to students who have low expectancy to succeed and put low value on academic success.

3.6 Self determination

The sixth theory included in this study is self-determination theory that looks at the different reasons for engaging in tasks, namely three types of motivational sources: intrinsic, external and amotivation (Ryan & Deci, 2000a, 2000b). Intrinsic motivation refers to the engagement in activities for their own sake, namely for the feelings of pleasure, interest, and satisfaction that derive directly from participation. External sources of motivation result in four regulation styles. Students with introjected regulation styles internalize the rules that shape their academic behaviors but are driven but reward and punishment, not passion for the task. Students with identified regulation actively choose to engage in academic behaviors but are motivated by external factors such as continued success. Those with highest level of regulation termed integrated are motivated by internalized valued outcomes of academic achievement, believing that that schoolwork fits a value system of hard work and perseverance. Amotivation stems from a lack of competence, the belief that an activity is unimportant, and/or when an individual does not perceive contingencies between her/his behaviour and the desired outcome (Ryan & Deci, 2000a, 2000b). This study hypothesizes that students with intrinsic motivation will achieve higher grades compared to students with extrinsic motivation and amotivation.

4. Flow Theory

There is an increasing awareness regarding the importance of the relationship among student engagement, student learning, and motivation (Wigfield, 1997, Fullagar & Mills, 2008). Despite this interest, little research has investigated the relation between engagement indicators and student motivation. The current study is an investigation of the strength and dynamics of this relation. One pertinent construct from positive psychology that provides clear picture of engagement is flow (Seligman & Csikszentmihalyi, 2000). Flow is a term first coined by Csikszentmihalyi (2000) as an optimal experience so engrossing and enjoyable that the activity becomes worth doing for its own sake without the impetus of extrinsic motivation (Csikszentmihalyi, 1999).

Being in a flow is described as being in a period of deep, intense involvement in activities that are challenging the person physically and/or intellectually but at the same time do not overwhelm the person's level of skill (Johnson, 2008). Flow theory suggest that students can enter a flow state when they are fully absorbed in their learning activity during which they lose their sense of time and have feelings of great satisfaction. Positive psychology focuses on constructs of optimism (positive attitude), feelings of authenticity (belief that one's achievement are deserved and recognized by others), and invitations (uplifting and empowering messages about own potentials). Positive psychology variables were said be stronger in high-achieving students than in low-achieving students (Pajares, 2001).

Csikszentmihalyi (1999) suggested that optimal learning experiences are intrinsically motivated and related to positive emotions and enhanced cognitive processing. In other words, learning occurs only when an individual is cognitively and emotionally engaged. A point need to be stressed here is the role of interest. A flow state can be achieved mainly when a person is interested in the task or activity he or she is doing. If the person dislikes an activity, it will be difficult for him or her to enjoy it. When one does not enjoy a task, one cannot perceive the task as pleasurable, challenging, and worthy of doing for its own sake. Based on qualitative accounts of individuals reporting on states of flow, it can be seen that concentration, interest, and enjoyment occur simultaneously during the flow experience.

This paper proposes that flow be included in the path model because when students have all the necessary ingredients of motivation to push them to success, students will arrive in a state of focused engagement, concentration and high focus or a state of flow. When students are motivated and become engrossed in their learning tasks, how can they not perform even slightly better?

Including flow into the framework of multifaceted motivation would help to explain how engagement in academic tasks improves student's overall performance. Applying flow theory to the model of motivation may explain the reasons why some students achieve better than others in academic work. Probably the subjective experience of having high concentration and optimal arousal due to perceived challenge and ability to master the task, and enjoyment in learning will explain better the causes of improved performance, which may lead to high academic achievement.

5. The Proposed Path Model

The aim of this paper is to highlight the need to integrate the constructs from different motivational theories into one motivational path. Specifically, how much does future time reference, achievement need, learning goals, self-efficacy, self-determination, and expectancy values together contribute to students' state of flow and academic achievement? The degree to which each of the different motivational construct contributes to the prediction of flow can be tested using the multiple regression models. It is also predicted that being in a state of flow will contribute to high academic performance, thus flow will also be treated as an intervening variable contributing to the final dependent variable, academic achievement. The hypothesized path model is shown in Figure 1.

This paper advocates an explanatory correlational research, employing the path modeling design to examine a series of dependent relationships simultaneously. The researcher proposes a path model based on past research and theoretical considerations, to be empirically tested to determine how well the model fits the data (Johnson & Christensen, 2008). The path model involves a group of six motivational forces affecting academic achievement, with flow as the mediator variable. It is predicted that the six motivational forces will influence the flow of students when learning, which in turn affects students' academic performance. Thus, flow is hypothesized as a dependent variable, acting as a mediator, and becomes an independent variable in subsequent dependent relationship.

Path analysis will hopefully describe the directed dependencies among a set of variables and it can lead on to a type of multiple regression analysis focusing on causality. Path analysis is a special case of structural equation

modeling (SEM) (Johnson & Christensen, 2008). SEM allows confirmatory rather than exploratory modeling. Thus SEM suits the purpose of this investigation since the research is designed to test theories of motivation that have been established by previous researchers, only to be expanded and refined in this study.

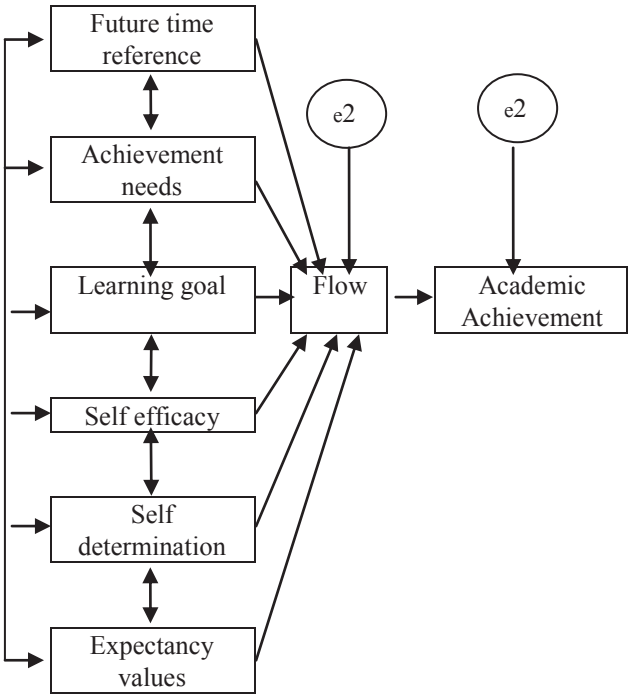

Figure 1: The hypothesized path model

In the proposed Motivational Flow Model shown in Figure 1, the six exogenous variables ($Ex_{1:}$ future time reference until $Ex_{6:}$ self determination) are modeled as being correlated and as having indirect effects (through $En_{1:}$ flow) on En_2: academic performance. Both endogenous' variables are dependent variables. The endogenous variables are also affected by factors outside the model (including measurement error). The effects of such extraneous variables are depicted by the 'e' or 'error' terms in the model.

6. Significance of the Proposed Path Model

A significant reason students achieve in school can be linked to having the motivation to excel, and the main reason students fail in school can be linked to the lack of motivation to perform academically. Motivation is the driving force that pushes individuals to act and behave towards a targeted goal (Lahey, 2004). Experts, parents and teachers have been interested in discovering the important factors influencing students' achievement in academic. Most people believe that motivation plays a significant role in determining whether students stay focused on school, and thus achieve or fail in school. Each student has a different level of motivation, as well as different personal and social factors that affect his or her motivation. It is imperative for educators and parents alike to understand better the interaction of the various aspects contributing to students' motivation in order to ensure the academic success of school children.

The findings of this study will result in a path model delineating the motivational path for students to achieve in school. Influences of important motivational forces to academic performance can be highlighted to students, teachers and parents so that everybody can acknowledge the significant role of each construct. The model will hopefully highlight the complex interactions of motivation that contributes to students' achievement in school.

The focus on flow theory will emphasize to various stakeholders the importance of being in this state in order to improve concentration, engagement, and therefore learning. Students can be exposed to the concept of flow and to

appreciate the importance of achieving flow when they perform a learning task. Teachers can also explain to students or create training programs to teach students how to achieve a flow state.

The proposed questionnaire instrument can serve as a valuable research tool in studying the motivation of secondary school students by determining the levels of each motivational component in the students. The instrument can be used for counseling purposes so that students may identify and better understand the specific types and levels of motivation that they possess. Teachers can use the instrument to assess motivational levels of their students, and when possible and necessary, reinforce the components of motivation that will help students become more efficient and academically successful. The instrument can also serve as a valuable resource and basis of information in studying the motivation of students in school as well as for designing programs in school in order to improve students' motivation in learning.

7. Conclusion

This paper discussed the literature search found by the researcher in her attempt to clarify the specific characteristics of each motivational theory and its relationships with flow and academic performance. Supports from past research have been forwarded to prove the significant role of the six theories in influencing achievement among school students. The paper also highlighted the significance of including flow as a mediator for students to perform better. Finally, readers are presented with the proposed model of motivational flow which shows the hypothesized relationships.

References

Ames, C. (1992). Classrooms: Goals, Structures, And Student Motivation. *Journal Of Educational Psychology*, 84, 261-271.

Bandura, A. (1997). Self-efficacy: Toward a unifying theory of behavioural change. Psychological Bulletin, 84, 191–215.

Beck, R. C. (2004). Motivation: Theories and principles (5th ed.). Upper Saddle River, NJ: Prentice

Boyatzis, R.E. and Kolb, D.A. (1995), "From learning styles to learning skills: the executive skills profile", Journal of Managerial Psychology, Vol. 10 No. 5, pp. 3

Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), Self processes in development: Minnesota symposium on child psychology (Vol. 23, pp. 167-216). Chicago: University of Chicago Press.

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum Press.

Dowson, M., & Mcinerney, D. M. (2001). Psychological Parameters Of Students' Social And Work Avoidance Goals: A Qualitative Investigation. *Journal Of Educational Psychology*, 93(1), 35-42.

Dweck, C. S. & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95, 256-273.

Eccles, J., & Wigfield, A. (2002). Motivational beliefs, values and goals. *Annual Review of Psychology*, 53(1), 109–124.

Greene, B. A., Miller, R. B., Crowson, H. M., Duke, B. L., & Akey, K. L. (2004). Predicting High School Students' Cognitive Engagement And Achievement: Contributions Of Classroom Perceptions And Motivation. Contemporary Educational Psychology, 2, 462-482.

Hardré, P. L. (2007). Preventing motivational dropout: A systemic analysis in four rural high schools. Leadership and Policy in Schools, 6(3), 231-265.Hardré, P. L. (2008). Taking on the motivating challenge: Rural high school teachers' perceptions and practice. Teacher Education and Practice, 21(1), 72-88.

Hardré, P. L., & Reeve, J. (2003). A motivational model of rural students' intentions to persist in, versus drop out, of high school, *Journal of Educational Psychology*, 95(2), 347-356.

Hidi, S., & Harackiewicz, J. M. (2000). Motivating the academically unmotivated: A critical issue for the 21st century. *Review of Educational Research*, 70, 151.

Husman, J., & Lens, W. (1999). The Role Of The Future In Student Motivation. *Educational Psychologist*, 34(2), 113

Hwang Y. S., Echols, C., Vrongistinos, K. (2002). Multidimensional Academic Motivation Of High Achieving African American Students. *College Student Journal.* Dec 2002. Vol. 36, Iss. 4.

Johnson, B. & Christensen, L. (2008). Educational Research. Quantitative, Qualitative and Mixed Approaches. 3rd.ed. Los Angeles: Sage Publications.

Lahey, B.B. (2004). Psychology. An Introduction (8th Ed.). Usa: Mcgraw-Hill.

Lens, W., Simons, J., & Dewitte, S. (2001). Student motivation and self-regulation as a function of future time perspective and perceived instrumentality. In S. Volet & S. Ja¨rvela¨ (Eds.), Motivation in learning contexts: Theoretical advances and methodological implications (pp. 233–248). New York: Pergamon.

Linnenbrink, E.A. & Pintrich, P.R. (2002). Motivation As An Enabler For Academic Success. *School Psychology Review*; 2002; 31,3, 313.

Miller, R. B., & Brickman, S. J. (2004). A model of future-oriented motivation and self-regulation. Educational Psychology Review, 16, 9-33.

Nicholls, J. G., Cheung, P. C., Lauer, J., & Patashnick, M. (1989). Individual differences in academic motivation: Perceived ability, goals, belefs, and values. Learning and Individual Differences, 1, 63

Pajares, F. (2001). Toward A Positive Psychology Of Academic Motivation. *The Journal Of Educational Research*. Bloomington: Sept/Oct 2001. Vol.95, Iss. 1; Pg. 27.

Pietsch, J., Walker, R., & Chapman, E. (2003). The relationship among self-concept, self-efficacy, and performance in mathematics during secondary school. *Journal of Educational Psychology,* 95(3), 589-603.

Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology*, 92, 544–555.

Pintrich, P. R., & Schunk, D. H. (1996). Motivation in education: Theory, research, and applications. Englewood Cliffs, NJ: Prentice. In Hardré, P.L ; Crowson, H.M.; Debacker, T.K.; White, D. (2007). Predicting the Academic Motivation of Rural High School Students. The Journal of Experimental Education. Washington: Summer 2007. Vol. 75, Iss. 4; 247-267

Rowley, S. J. (2000). Profiles Of African American College Students' Educational Utility And Performance: A Cluster Analysis. *Journal Of Black Psychology*, 26, 3.

Ryan, R. M., & Deci, E. L. (2000a). Self-Determination Theory And Facilitation Of Intrinsic Motivation, Social Development, And Well-Being. *American Psychologist*, 55, 68-78.

Ryan, R. M., & Deci, E. L. (2000b). Intrinsic And Extrinsic Motivations: Classic Definitions And New Directions. *Contemporary Educational Psychology*, 25, 54-67.

Schunk, D. H. (1989). Self-efficacy and achievement behaviors. *Educational Psychology Review, 1,* 173-208.

Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist, 26,* 207-231.

Simons, J., Dewitte, S., & Lens, W. (2000). Wanting to have versus wanting to be: The effect of perceived instrumentality on goal orientation. *British Journal of Psychology*, 91, 335–351.

Simons, J., Vansteenkiste, M., Lens, W., & Lacante, M. (2004). Placing Motivation and Future Time Perspective Theory in a Temporal Perspective. *Educational Psychology Review*, Vol. 16, 2,

Smith, M., Duda, J., Allen, J., & Hall, H. (2002). Contemporary Measures Of Approach And Avoidance Goal Orientations: Similarities And Differences. *British Journal Of Educational Psychology*, 72, 155-190.

Stipek, D.J. (2002). Motivation To Learn (4th Ed). Boston: Allyn & Boston.

Van Calster, K., Lens, W., & Nuttin, J. R. (1991). Affective attitude towards the personal future: Impact on motivation in high school boys. *American Journal of Psychology*, 100, 1–13.

Walker, C. O., Greene, B. A., & Mansell, R. A. (2006). Identification With Academics, Intrinsic/Extrinsic Motivation And Self-Efficacy As Predictors Of Cognitive Engagement. *Learning And Individual Differences*, 16, 1-12.

Weiner, B. (2000). Interpersonal And Intrapersonal Theories Of Motivation From An Attributional Perspective. *Educational Psychology Review*, 12, 1-14.

Wigfield, A., & Eccles, J. S. (2002). Expectancy value of achievement motivation. *Contemporary Educational Psychology*, 25(1),