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# Self-Regulation in the Relationships and Educational Experiences of University Students

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**Abstract:** This research evaluates what effects self-regulation, motivation, and self-efficacy have on relationship satisfaction and educational success of university students. The ability to self-regulate is an important component in goal attainment. Limited investigation has been done on self-efficacy and motivation along-side self-regulation within an educational framework, and only marginal research has been completed with the non-romantic relationships of college students and self-regulation. Data suggest level of motivation did not predict relationship satisfaction or self-efficacy toward school. Learning strategies (indicative of motivation) and self-efficacy did not predict school performance. A second form of motivation, goal orientation, correlated with self-efficacy. Data also indicate factors other than motivation and self-efficacy may be more predictive of the ability to self-regulate. Further study on specific relationship and educational goals may increase understanding on how higher education is experienced by the university student.

**Keywords:** *self-regulation, relationships, education*

Bandura (1986) defined self-regulation as a process whereby an individual sets goals, evaluates his or her progress, and ultimately maintains a motivational focus. Blair and Diamond (2008) expanded the definition of self-regulation to include, “the primarily volitional cognitive and behavioral processes through which an individual maintains levels of emotional, motivational, and cognitive arousal that are conducive to positive adjustment and adaptation, as reflected in positive social relationships, productivity, achievement, and a positive sense of self,” (p. 900). The key elements of this expanded definition are that an individual actively self-determines his or her own state, level of progress, and motivation toward a future goal. The current study examines the effects self-regulation, self-efficacy, and motivation have on educational and relationship success. “Perceived self-efficacy is defined as beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments,” (Bandura, 1997, p. 3). Bandura (1997) reports that individual self-efficacy affects what behaviors are pursued, how much effort we put forth, how much time we will choose to encounter obstacles and failures, our resilience to adversity, whether our thoughts hinder or aid us, the level of stress and depression when in a difficult situation, and the level of

accomplishments realized. Motivation is the drive to complete a task and has both intrinsic and extrinsic forms that are explained further in the paper (Nix, Ryan, Manly, & Deci, 1999).

## Literature Gap and Study Purpose

Minimal research has been conducted on self-regulation in both educational and relationship situations. Education and relationships are pieces of everyday life for university students and their ability to self-regulate is important to their success. Despite their potential relationships, self-efficacy, motivation, and self-regulation have not been studied together. Additionally, non-romantic relationships have not been a focus of research. It is necessary to consider non-romantic as well as romantic relationships because the student experiences them both. This research intends to expand the literature on relationships between self-efficacy, motivation, and self-regulation and how they influence educational and relationship success for the university student.

The research question is:

**RQ:** What relationship does self-regulation have with self-efficacy, motivation, and GPA in university students?

Hypotheses addressed in this study are:

**H1:** Self-efficacy and level of motivation (goal orientation, task value, control of learning subscales of the MSLQ) will correlate.

**H2:** Self-efficacy will predict self-regulation: Students with higher levels of self-efficacy will have higher levels of self-regulation than students with lower levels of self-efficacy.

**H3:** Student level of motivation (MSLQ) will predict self-regulation: Students with higher levels of motivation will have higher levels of self-regulation.

**H4:** Level of motivation will predict educational success as measured by grade point average (GPA).

**H5:** Student level of motivation (MSLQ) will predict relationship satisfaction.

## REVIEW OF LITERATURE

Baumeister and Heatherton (1996) discuss decisions that must occur to exert the self-regulation process on behaviors. These authors described self-regulation as a “feedback loop” where one is continuously cycling through a series of steps to improve each given action (p. 2). Self-regulation involves having a set of standards, which are defined as “ideals, goals, or other conceptions,” (p. 2). These standards are determined by what society expects with regard to an individual’s behavior, the understanding one has of oneself, and personal aspirations. Examples of each might include when an individual is expected by society to behave in a professional manner at work. The individual must self-regulate to ensure that they wear professional attire rather than casual clothes that they would truly prefer. On a related note, this person likely has a self-defined standard of succeeding at work and so they continue to wear professional clothes despite not wanting to because they know it will allow them to succeed at work. This individual will ultimately reach their personal aspiration of a promotion by maintaining self-regulation in their dress and other work behaviors. Standards must be identified before the self-regulation feedback loop can begin.

The second step is monitoring actions in order to regulate a specific behavior. Continuing the professional dress example, the individual in the monitoring stage would need to get the clothes dry-cleaned and in good shape to ensure they continue wearing them for work. The final step in the process involves the operate phase where it is determined if the behavior was regulated at an acceptable level to meet the expected outcome. If the behavior achieved what was desired, then the cycle is continued so to regulate the behavior each time it occurs. However, if self-regulation falls short of the planned standards, adjustments must be made to the self-regulation process to meet the goal as effectively as possible. Baumeister and Heatherton (1996) suggest that the process seems to have a logical flow, but research often shows self-regulation has a high exhaustion rate and individuals are limited on how long they can maintain regulation of multiple behaviors.

Nix, Ryan, Manly, and Deci (1999) examined the ways self-regulation influence positive affect such as happiness and vitality. The results point toward the restorative vitalization of self-regulated actions as opposed to diminishing control and highly structured activities. Ryan and Deci (2006) furthered this research by using self-determination theory (SDT) to review the benefits of autonomy versus controlled regulatory influences. These benefits were explored in association with goal performance, strong social relationships, persistence, and well-being. Ryan and Deci (2006) concluded that self-determination research fosters self-regulation and the positive mental health. “As SDT-based research has documented the benefits of autonomy and autonomy support in contexts such as families, schools, workplaces, religious institutions, sport teams, clinics, and health care settings, these findings have been used to enhance human potential, reflected in behavioral, relational, and experiential outcomes,” according to Ryan and Deci (2006, p. 1580). These areas were examined across several different domains and cultures and the research concluded that there is universal value in autonomous regulation that provides

better opportunity for understanding, creative energy, and well-being.

### **Self-Regulation in Relationships**

Regulating responses can benefit both romantic and non-romantic relationships (Baumeister, 2009). An example of self-regulation improving relationships is when an individual works to change their poor listening behavior. They identify listening as a problem, determine how they can develop more active listening skills, and apply active listening in a self-regulation cycle for the behavior. The total amount of self-control combined between the couple is what has been linked to successful, long-term relationships. Recent research suggests “high maintenance interactions deplete self-regulatory resources,” meaning theoretically that the more effort one puts into the relationship the less effort one has available toward other things such as work or hobbies (p. 1434). Because people have limited will power, a choice must be made between constant self-regulatory behaviors in relationships and compromises in the relationship to allow personal time (Baumeister, 2009).

Despite research showing couples that match each other in personality fair better in the long run, this is not the case with levels of self-regulation (Baumeister, 2009). There should be a “sum of the two partner’s levels” of self-regulation, meaning that there must be some variety in their levels of self-regulation balancing impulsivity versus over-controlling actions (p. 1435). Though this current study will not look at long-term effects, it will be beneficial to examine the different levels of self-regulation with individuals who identify as being in a relationship.

As well, Peetz and Kamrath (2013) describe dispositional self-regulatory behavior, called conscientiousness, as an important factor in relationships. Emotions cloud the actual actions by an individual within a relationship. This suggests an individual will say they do many communal things for their partner (e.g., bringing flowers or making a special dish), but in reality do not actually engage in the number or types of

communal acts reported. Thus, individuals may respond saying they are more active in the relationship than actually demonstrated. The current study’s measures will be useful in looking at self-regulation with regard to relationships along-side demographic questions.

### **Self-Regulation in Education**

Self-Regulation has also been shown to play a role in educational success. Blair and Diamond (2008) discussed how a sample of kindergarten teachers in the United States indicated that 50% or more of the children in their classes were exhibiting problems limiting individual enrichment and the benefit of an early childhood education. Specific behavioral problems reported by these respondents included students’ inability to follow directions, lack of control over attention, and specifically problems with self-regulation. These issues were listed as the main causes of lack of school readiness in children. The article provided a list of approaches in order to combat a lack of self-regulation and enhance school readiness. These authors emphasize communication of wants, needs, thoughts, and feelings verbally as key toward the promotion of self-regulation. They also emphasized the need for social relationships, community, and positive environment toward furthering school readiness and learning.

Self-regulation has also supported the success of older learners. Self-Regulated Learning (SRL) has been studied through online courses and students’ academic achievement (Cho & Shen, 2013). Skillful self-regulated learners have been reported to have higher intrinsic goal orientation and higher academic self-efficacy than less skillful students. Additionally, skilled learners adjust their learning process for online courses better than non-skilled learners. Online learning makes SRL more difficult because the student is isolated and has a lack of immediate support from either the professor or through student help. As a result, the dropout rate is higher in online courses because students often lack SRL.

### **Motivation and Relationship Satisfaction**

There is limited research on the effects extrinsic and intrinsic motivation has on friendship, co-workers, or other non-romantic relationships. Extrinsic motivation is driven by external factors such as good grades or higher wages. In contrast, intrinsic motivation is internally based on the self-esteem or fulfillment that a person feels from meeting a goal. Among romantic relationships, gender differences are evident with different types of motivation. Brimhall and Butler (2007) found that if a husband has a high intrinsic religious motivation, relationship satisfaction was higher for partners. It was also suggested that wives were more satisfied with a relationship if they developed a higher level of extrinsic motivation (Brimhall & Butler, 2007). The reasons for these gender differences are unclear, but present an important distinction that potentially influence the success and satisfaction of student relationships. The current research aims to examine gender differences in levels of motivation and the impact on relationship satisfaction.

### **Motivation and School and Work Performance**

Kahoe and McFarland (1975) found that extrinsic motivation positively influenced college GPA. more frequently than intrinsic motivation. Intrinsic motivation only improved GPA when there was a level of high challenge. Researchers, using the Work Preference Inventory (WPI), studied the different qualities of employees who were either extrinsically or intrinsically motivated (Amabile, Hill, Hennessey, & Tighe, 1994). Personality, attitudes, and perceptions of work were shown to have an impact on intrinsic motivation. This finding indicates more productive attitudes and more positive perceptions result in higher intrinsic motivation at work. However, the authors also suggest as the age and experience of workers increases so does extrinsic motivation. When an employee is between 30 and 50 years of age and has more experience on the job, their extrinsic rewards (i.e., wages, vacation time) also increase as well as extrinsic motivation. Younger (< age 30) employees tend to have higher intrinsic motivation because they are not

receiving the same extrinsic benefits as older employees with higher extrinsic motivation.

## **METHOD**

### **Participants**

A sample of 94 individuals ( $N = 65$  males, 69.1%;  $N = 28$  females, 29.8%;  $N = 1$  bigender, 1.1%) was surveyed using quantitative methods and consisted of students enrolled at a mid-size Western university (see Table 1). The sample included full-time undergraduate students currently registered for courses who ranged between 17-49 years of age ( $M = 19.0$ ). Of the total number of participants 67 (71.3%) were freshman, 11 (11.7%) were sophomores, 10 (10.7%) were juniors and 6 (6.4%) were seniors. Most were either Caucasian (67%) or Hispanic (15.9%). GPA for the participants ranged from 2.0 to 4.0 ( $M = 3.43$ ) with a total of 70.2% reporting. Participants agreed to complete study surveys as partial fulfillment of course credit. Institutional Review Board (IRB) approval was obtained.

### **Instruments**

#### *Background questionnaire*

The background questionnaire includes items asking: age, gender, marital status, familial data, relevant academic information, and self-efficacy questions. Items were selected so as to provide an overall description of participants.

#### *Self-Efficacy*

Self-efficacy was measured using three sub-questions: ability to complete a task, efficacy expectation (how likely they could meet the requirements of a task), and outcome value (how important it was to them to effectively do a task). There does not exist one all-purpose self-efficacy scale, thus, the self-efficacy questions for the present study were developed using Bandura's guidelines regarding the nature and structure of self-efficacy scales (Bandura, 1997).

#### *Motivated Strategies for Learning Questionnaire (MSLQ)*

Pintrich (1993) reports on the MSLQ. The MSLQ is a self-report instrument used to measure

college students' motivational orientation and strategy toward learning for a college course. The motivational scales of the study are based on social-cognitive theory that proposes three motivational constructs. These constructs include: (1) expectancy, (2) value, and (3) affect. There were two subscales that were expectancy-related. These are: (a) perceptions of self-efficacy, and (b) control beliefs for learning. There are also three sub-scales in measuring value beliefs: (a) Intrinsic goal orientation, (b) extrinsic goal orientation, and (c) task value beliefs (judgments of interest, usefulness, and importance to the student). There are three general scales in studying learning strategy. These are: (1) cognitive, (2) metacognitive, and (3) resource management. The MSLQ divides the questionnaire into two sections: (A) Motivation and (B) Learning Strategies. The questionnaire contains 81 questions and is based on an ordinal scale ranging from 1-7 as 1 being not true of this person and 7 as being very true of this person. The motivation section assesses intrinsic and extrinsic goal orientation, task value, control of learning beliefs, self-efficacy for learning and performance, and test anxiety. The learning strategies section assesses rehearsal, elaboration, organization, critical thinking, metacognitive self-regulation, time/study environmental management, effort regulation, peer learning, and help seeking.

#### *Self-Regulation Questionnaire (SRQ)*

According to Miller and Brown (1991) self-regulation is the ability to develop, implement, and maintain a behavior in an effort to reach one's goal. These authors indicate that behavioral self-regulation may not occur when there is failure or deficits in the receiving of relevant information, evaluating the information and comparing it to norms, triggering change, searching for options, formulating a plan, implementing the plan, and/or assessing the plan's effectiveness. Significant amounts of research have been completed with self-regulation and addictive behaviors; however, self-regulation is recognized as a measure of general behavioral control. The SRQ (Brown, Miller, & Lawendowski, 1999) was developed as a way to assess general self-regulatory processes.

Test-retest reliability for the SRQ total scores was  $r = .94, p < .001$ . Internal consistency was also high with a Cronbach alpha of  $\alpha = .91$ . The following ranges were established as a rule for interpreting the SRQ total score. Those with a total score of 213 or less have low (impaired) self-regulation capacity. Those total scores between 214 and 238 fall in the intermediate (moderate) self-regulation capacity. Those with a score of 239 or above are deemed to possess high (intact) self-regulation capacity. Cronbach alpha scores were between .70 and .77 for the MSLQ (Ilker, Arslan, & Demirhan, 2014).

#### *Locke-Wallace Relationship Adjustment Test*

This is rapid self-assessment tool that examines marriage satisfaction and has since been applied to other types of romantic relationships. Half of the assessment is a scale of 6 between "Always Agree" and "Always Disagree" between partners' behaviors. Specific aspects in a relationship such as sexual satisfaction, effective communication, and shared activities are assessed. The other half of the survey is a multiple-choice examination to analyze how the individual interacts in the relationship. The test was changed to fit modern terminology while retaining question format.

#### **Procedure**

The method of data collection involved participants being sought through the Psychology Department Participant Pool. The current researchers utilized this method of data collection in order to obtain a broad sample of participants as well as facilitate ease of data collection throughout the university environment. Approximately 30 minutes was required to complete the study. All participants were presented with an informed consent. With the completion of data collection, participants were thanked for their participation and debriefed. Participants were given contact information for the research group in case they had any questions, as well as sources of support during the care process. Numerical values were assigned to participants and at no time was a name or personal

information associated with a participant questionnaire.

**Analysis**

Data analysis was conducted using SPSS version 22 to identify correlational and predictive relationships. Linear regression analyses were conducted with self-efficacy and motivation as variables that predicted self-regulation, GPA or relationship satisfaction. The correlational analysis examined the relationship between self-efficacy and motivation.

**RESULTS**

Participants were recruited using an online participant pool. Levels of motivation were measured using the MSLQ and received a total score across motivation and learning strategies. The SRQ measured self-regulation as well as some aspects of self-efficacy which were: efficacy expectation, outcome expectancy, and outcome value. A total self-regulation score and total self-efficacy score were obtained. General demographic information is available in Table 1. GPA was a rating of educational success.

Table 1. Participant demographics

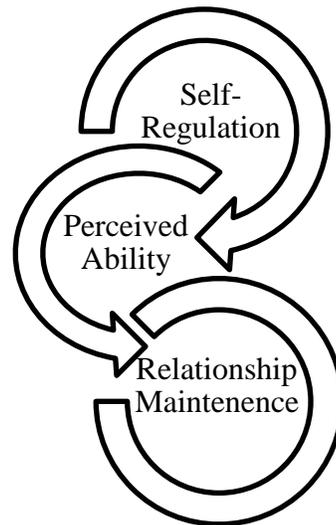
<b>Mean Age</b>	19.0
<b>Mean GPA</b>	3.43
<b>Gender</b>	N (%)
Female	28 (29.8%)
Male	65 (69.1%)
Bi-gender	1 (1.1%)
<b>Grade Level</b>	
Freshman	67 (71.3%)
Sophomore	11 (11.7%)
Junior	10 (10.7%)
Senior	6 (6.4%)
<b>Ethnicity</b>	
Caucasian	63 (67.0%)
Hispanic	15 (15.9%)
Other	16 (17.4%)

Note: N = 94

Hypothesis one predicted that self-efficacy for educational success is related to the evaluation of task value (motivation subscale of MSLQ). The hypothesis was supported ( $r(94) = .23, p < .05$ ).

We found that task value correlated with self-efficacy. Hypothesis two, which stated that self-efficacy predicts higher self-regulation, was not supported. Using linear regression analysis, self-efficacy did not predict self-regulation,  $R^2 = .03, F(1, 92) = 2.91, p > .05$ . For hypothesis three, motivation did not predict higher levels of self-regulation,  $R^2 = .002, F(1, 92) = .229, p > .05$ . Hypothesis four considered whether level of motivation predicts performance in school as measured by GPA. Level of motivation did not predict educational success,  $R^2 = .001, F(1, 68) = .057, p > .05$ . For hypothesis five, we examined the level of motivation in predicting relationship satisfaction. The level of motivation did not predict relationship satisfaction as measured by the Locke-Wallace,  $R^2 = .000, F(1, 92) = .008, p > .05$ . However, self-regulation did predict the perceived ability to maintain a relationship,  $b = .225, t(92) = 2.211, p < .03$  (Figure 1).

Figure 1.



Self-regulation also predicted ability to maintain a relationship,  $R^2 = .05, F(1, 92) = 4.88, p < .03$ . Self-regulation predicts a desire to maintain a moral code of conduct,  $b = .302, t(92) = 2.38, p < .05$ .

**DISCUSSION**

There is extensive research to support our overarching hypotheses about the relationships between self-regulation, motivation, and self-

efficacy with students for education and relationship success (Blair & Diamond, 2008; Duncan & McKeachie, 2005; Peetz & Kammrath, 2013; Puzziferro, 2008; Ryan & Deci, 2006). We expected most students would demonstrate a predictive connection between motivation toward task success, self-efficacy toward that task, and self-regulation toward maintaining that task. However, these connections were not illustrated by the data.

A correlation between self-efficacy and task value, a subscale of motivation, was evident. This finding is supported by prior research where individuals who place value on engaging in a behavior will have more success when applying that behavior to their education or relationships (Blair & Diamond, 2008; Duncan & McKeachie, 2005). For example, if a teacher only offers busy-work in class and a student feels the work will not help them understand the material, then the student may not have task value for this work. To have task value would mean the student is engaging in a process they feel is beneficial toward individual school success. Task value may be worth studying further to determine if it has relationship with self-regulation or other subscales of motivation.

The second hypothesis, higher self-efficacy leading to higher self-regulation found no predictive relationship. Future research might include further investigation into what connections exist between these two variables as well as the identification of potential mediating variables.

In testing hypothesis three, motivation did not predict self-regulation. This was unexpected because motivation, as the drive to engage in a task, seems like it would predict ability to self-regulate task behavior. This relationship is not supported in prior research (Duncan & McKeachie, 2005). A more thorough examination that includes the many facets of motivation may demonstrate predictive relationship. Potential aspects of motivation to be examined may include: initiation, direction, energy, and persistence.

For hypotheses four and five, data did not support motivation predicting academic performance or relationship satisfaction. This may be due to the limited number and variability of GPA's reported and the use of MSLQ to measure motivation in relationships.

### **Implications**

After evaluating our findings, it appears that the relationships between self-efficacy, motivation, and self-regulation are not as linear as expected. For example, our hypothesis that high self-efficacy would predict high self-regulation was not supported. This does not mean that there is no relationship between the two. A relationship may exist with other constructs such as motivation or student interest and investment in tasks. We discovered that there are complex and possibly bidirectional relationships with some of the variables. Educational and relationship success will continue to be impacted by these factors despite the limited knowledge we have about them. Student success can be improved and further determined by the student themselves if more research is conducted on these factors. Knowing how to maintain self-regulation despite infringing factors will aid in the facilitation of the educational process along with various types of student relationships.

### **Limitations and Future Directions**

A complication in our study was that 70.2% of participants did not report GPA. This limited our ability to draw conclusions about educational success. The small number of GPA's may be explained by the fact that 71.3% of the sample was freshmen students. These students may not have established a college GPA at the time of the survey. In the future, an explanation would be included that if GPA is unknown, the student should report their last known GPA (i.e., high school). Reported participant GPA's and clearer instructions may yield more beneficial results about education and relationships with motivation, such as found by Baumeister (2009), and Duncan and McKeachie (2005).

The MSLQ is a tool primarily used in prior research to measure motivation in learning

strategies. We used this survey to measure motivation in both education and relationships. The MSLQ has not been demonstrated to be effective in measuring motivation toward relationships. In altering this study, we would identify a tool that specifically measures motivation toward the continuance of relationships.

There are several points of interest for future research. Asking participants to select a specific goal in their relationship and/or education and then tracking their progress could shed light on the self-regulation process. Our study relied on self-report from a single assessment. Multiple assessment periods for tracking specific goals with participants might explain possible connections between self-regulation, motivation, and self-efficacy. Mixing survey questions could conceal survey intentions and eliminating specific section titles might help disguise the nature of the survey. The inability to know what each question is measuring may prevent participants from engaging in social desirability reporting. Also, stratified samples for freshmen, sophomore, junior, and senior students could allow for greater identification of differences between these groups to be explored.

In spite of the complications, the connectivity between the study's variables of interest is still worth investigating. Individually, these variables play significant roles in the daily perceptions and behaviors of people. Understanding how self-regulation, self-efficacy and motivation influence education may aid in school curriculum development and in the day-to-day tasks a student engages in with regard to predicting academic success. Relationships and how to successfully maintain them, is also an essential part of a college student's social life. Thus, understanding how self-regulation plays a role toward effective relationship maintenance may impact the ultimate success of individual relationships. Experiencing accomplishments in education and in interpersonal relationships, two goals the successful college student seeks, may prove more effective with continued research.

## REFERENCES

- Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology*, *66*, 950-967. doi:10.1037/0022-3514.66.5.950
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Co.
- Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall.
- Baumeister, R. F. (2009). Self-regulation in relationships. In H. T. Reis & S. Sprecher (Eds.), *Encyclopedia of human relationships* (Vol. 3, pp. 1434-1436). Thousand Oaks, CA: SAGE Publications.
- Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry*, *7*(1), 1-15. doi:10.1207/s15327965pli0701\_1
- Blair, C. & Diamond, A. (2008). Biological processes in prevention and intervention: The promotion of self-regulation as a means of preventing school failure. *Development and Psychopathology*, *20*, 899-911. doi:10.1017/S0954579408000436
- Brimhall, A. & Butler, M. (2007). Intrinsic vs. extrinsic religious motivation and the marital relationship. *The American Journal of Family Therapy*, *35*, 235-249. doi:10.1080/01926180600814684
- Brown, J. M., Miller, W. R., & Lawendowski, L. A. (1999). The Self-Regulation Questionnaire in L. VandeCreek & T. L. Jackson (Eds.) *Innovations in clinical practice: A source book* (Vol. 17, pp. 281-289). Sarasota, FL: Professional Resource Press.
- Cho, M. & Shen, D. (2013). Self-regulation in online learning. *Distance Education*, *34*, 290-301, doi: 10.1080/01587919.2013.835770
- Duncan, T. G., & McKeachie, W. J. (2005). The making of the Motivated Strategies for

- Learning Questionnaire. *Educational Psychologist*, 40, 117-128.
- Kahoe, R. D., & McFarland, R. E. (1975). Interactions of task challenge and intrinsic and extrinsic motivations in college achievement. *Journal of Educational Psychology*, 67, 432-438. doi:10.1037/h0076620
- Ilker, G. E., Arslan, Y., & Demirhan, G. (2014) A validity and reliability study of the motivational strategies for learning questionnaire. *Educational Sciences: Theory & Practice*, 14(3). 829-833. doi: 10.12738/estp.2014.3.1871.
- Miller, W. R. & Brown, J. M. (1991). Self-regulation as a conceptual basis for the prevention and treatment of addictive behaviours. In N. Heather, W. R. Miller & J. Greeley (Eds.), *Self-control and the addictive behaviours* (pp. 3-79). Sydney, Country: Maxwell Macmillan Publishing Australia.
- Nix, G. A., Ryan, R. M., Manly, J. B., & Deci, E. L. (1999). Revitalization through self-regulation: The effects of autonomous and controlled motivation on happiness and vitality. *Journal of Experimental Social Psychology*, 35, 266-284.
- Peetz, J. & Kammrath, L. (2013). Folk understandings of self-regulation in relationships: Recognizing the importance of self-regulatory ability for others, but not the self. *Journal of Experimental Social Psychology*, 49, 712-718. doi:10.1016/j.jesp.2013.02.007
- Pintrich, P. R. (1993). Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ). *Educational and Psychological Measurement*, 53, 801-813. doi:10.1177/0013164493053003024
- Puzziferro, M. (2008). Online technologies self-efficacy and self-regulated learning as predictors of final grade and satisfaction in college-level online courses. *American Journal of Distance Education*, 22, 72-89. doi:10.1080/08923640802039024
- Ryan, R. M. & Deci, E. L. (2006), Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality*, 74, 1557–1586. doi:10.1111/j.1467-6494.2006.00420.x