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# The Influence of Self-Regulated Learning Strategies Towards Academic Performance of College Students

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A R T I C L E I N F O

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A B S T R A C T

This research endeavor is conducted to determine the significant influence of self-regulated learning strategies towards academic performance of college students. This study utilized non-experimental quantitative research design employing descriptive correlational technique to find out the significant relationship of the variables. The data were analyzed coming from 290 participating first year students enrolled in a sectarian school in Davao City. Mean, pearson r and linear regression analysis were used to treat the gathered data. The findings of this study led to the following conclusions: The level of self-regulated learning strategies and academic performance were both assessed high. This means that the two variables were oftentimes observed by the college students. Moreover, there is a significant relationship between self regulated learnin g strategies and academic performance of college student. Further, self-regulated learning strategies significant influence the academic performance of college students.

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## INTRODUCTION

In this period of rapid growth and global linkages, everyone is facing challenges and dripping to ameliorate his/her performance because it exhibits the quality andrecognition (Agrawal & Nehajul, 2017). Also, for a quite some time it has been a worry of many groups on components adding to academic performance among students in learning foundations, beginning from as low as pre-primary to as high as college level. Further, important focus of cognitive educational psychology is accounting for growth or decline in academic performance (Stringer & Heath, 2008). In addition, mental researchers have attempted to explain academic performance by analyzing the intellectual factors leading to school failure (Da Fronseca et al., 2009).

Academic success is important because it is strongly linked to the positive outcomes we value (Regier, 2011). Thus, student's academic future and career mostly depend on his or her academic performance (Agrawal & Nehajul, 2017). Moreover, academic performance of a student also paves the path of prosperity for any country (Bance & Acopio, 2016) thus academic institution must produce holistically developed attain academic success. Bandura's social cognitive theory, a change in academic competency, test competency, time management, or study strategies may influence a change in academic performance. Academic competency, test competency, time management, and study strategies are variables that are significantly associated withacademic performance (Sansgiry, Kawatkar, Dutta, & Bhosle, 2004).,It is in the above context that the researcher would like to find out if there is a domain of self-regulated learning strategies which are cognitive strategy use and self-regulation (Pintrich & De Groot, 1990) could significantly influence the academic performance of college students since existing studies are only focused on the main variables of the study. Thus, the researcher has not come across with a similar study in the local setting because of insufficient empirical studies and most researches were conducted abroad. Therefore, there is an urgency to conduct the study for a contribution to the existing body of knowledge.

### Research Objective

This study aims to determine which domain of self-regulated learning strategies significantly influences the academic performance of college students. Specifically, this study has the following objectives:

1. To assess the level of self-regulated learning strategies of college students interms of:
   1.1 cognitive strategy use; and
   1.2 self-regulation.
2. To describe the level of academic performance of the college students interms of:
   2.1 academic self-efficacy;

2.2 achievement motivation;
2.3 academic engagement; and
2.4 social engagement.

3. To find out the significant relationship between self-regulated learning strategies and academic performance of college students.
4. To determine which domain of self-regulated learning strategies significantly influences the academic performance of college students

**THEORETICAL REVIEW**

Self-regulated learning is the ability of the learner to control and regulate his own learning through the usage of cognitive and metacognitive strategies (Alario-Hoyos et al., 2017). There are three categories of strategies that students should employ to regulate their own learning (Basso & Abrahão, 2018) cognitive strategies, metacognitive strategies; and resource management strategies. Researchers unanimously recognize that self-regulated learning is one of the most essential skills that students should possess, particularly in this information age (Chen, 2002). Students must become self-regulated learners seeing that in the future, they have to proactively and assertively thrive in an information-rich and technology-driven society (Lapan, Kardash, & Turner, 2002).

Students who used self-regulated learning strategies tend to perform better because; students' learning experiences are shaped and influenced by teachers (Schunk, 1989). The author also added that to promote and sustain students' usage of self-regulated learning strategies, teachers not only have to teach students strategies, but also convince them that these strategies will improve their performance and it has benefited other students. Self-regulated learning consists of the ability of subjects to organize their own learning projects, progress and strategies to deal with activities and obstacles (Perrenoud, 1999).

Improving self-regulated learning strategies is possible through teaching activities that encourage students to self-monitor and control their performance (Azevedo et al., 2008; Paris & Paris, 2001). The role of teachers in the development of self-regulated learning strategies is essential (Spruce & Bol, 2015). Students regulate themselves when they participate actively in their own learning process, from the metacognitive, motivational and behavioral point of view (Zimmerman, 2000). Self-regulated learning would aim at the optimization of learning and improvement of the perception students have about their own efficiency and control they have over the learning processes (Mottier, 2015).

Academic performance depends on many different factors like student's cognitive abilities, emotional intelligence, socio-economic status, school environments, home environments, curriculum, instructional materials (Agrawal, & Nehajul, 2017). Students with better emotional intelligence

discovered higher academic performance than the students with low emotional intelligence (Farooq, 2003). A high level of academic performance may not always be associated with a high intelligence quotient or hard work (Sansgiry et al., 2004). Academic achievement can be understood in terms of person's performance on a knowledge test aimed at assessing specific knowledge components (Mayer, 2011).

Various studies have been carried out on the factors that affect students‟ academic performance or achievement in schools, colleges and universities (Farooq et al., 2011). The academic performance determines the future goals and objectives of students (Nyagosia, 2011) and the determinants of academic performance of the students include, class participation, class assigned, home-work assignments, text examinations and participation in competition or others events. Furthermore, students encounter and become involved with their college environment in various ways, and these experiences influence their development (Saenz et al., 2011).

Academic involvement is the degree to which students expend time, effort, and mental and physical energies in academic activities that lead toward positive academic outcomes (Wolf-Wendel, Ward, & Kinzie, 2009). Students who do well in school are better able to make the transition into adulthood and to achieve occupational and economic success (Regier, 2011). Academic involvement consist of behaviours and activities such as participating in class discussion, participating in study groups, interacting with faculty, time spent studying, or motivation (Kuh et al., 2009).

Academic performance is the knowledge and skills that students have mastered in a subject or a course (Lee, 2010). It is basically a measure of how well a student have performed in the various assessment items set for them based on some educational criteria determined by educators. In addition, Gasco et al. (2014) noted that motivation plays an important role in learning because it greatly explains the academic performance of the student.

**Theoretical and Conceptual Framework**

This study is anchored on self-regulated learning theory which learner control and regulate his/her own learning through the usage of cognitive and metacognitive strategies (Pintrich & De Groot, 1990). These strategies include planning, monitoring and evaluation of learning can be influenced by someone‟s objective (Spruce & Bol, 2015) and, more specifically, by the teacher‟s work. Further, students are more inclined to self-regulate if teachers promote student-centered learning, provide them with appropriate feedbacks, and teach them self-regulated learning strategies (Sigelman, 1999).

Moreover, this research is supported with social cognitive theory by Alber Bandura that students' learning behavior is closely related to their social experiences, or interactions with teachers. Since students' learning experiences are shaped and influenced by teachers (Schunk, 1989). To achieve a good school performance, students need to develop skills that allow monitoring

effectiveness of the learning strategies adopted (Pereira, 2012). Improving self-regulated learning strategies is possible through teaching activities that encourage students to self-monitor and control their performance (Spruce & Bol, 2015).

Presented in Figure 1 is the conceptual paradigm of the study presenting the relationship of the two variables. Self-regulated learning strategies according to Pintrich & De Groot (1990) has the following domains: *cognitive strategy use* which refer to activities that learners utilize in the acquisition, storage, and retrieval of information and *self-regulation* which refer to activities utilized by learners for monitoring and reflecting on their learning process to accomplish a goal.

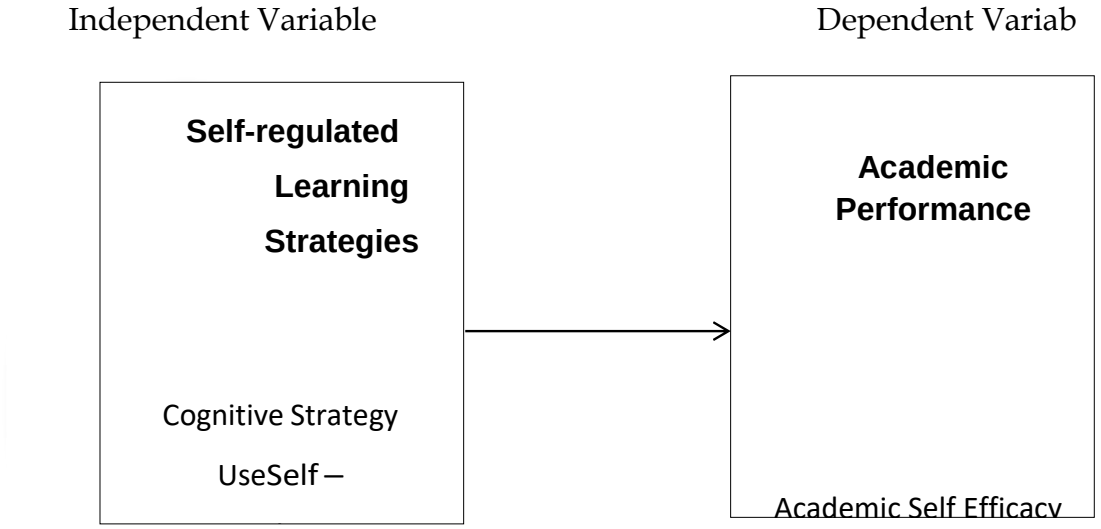


Figure 1. The Conceptual Paradigm Showing the Variables of the Study

On the other hand, academic performance based from the study of Huang (2011) has these domains: *academic self-efficacy* refers to student confidence in their ability to perform specific accomplishments necessary for their collegiate academic success*; achievement motivation* is a construct that represents students„ motivation to succeed or to overcome obstacles and to complete tasks in college or general need for achievement*; academic engagement is the amount of intellectual effort that a student puts forth in his or her academic life;* and *social engagement* is the connection that a student establishes with other students and community.

## METHODOLOGY

This academic endeavor used non-experimental quantitative research design incorporated with descriptive correlational research techniques. Non-experimental because the variables of this study did not manipulated and there is no random assignments given to the respondents (Johnson and Christensen, 2008). Descriptive research was used to obtain information concerning the status of the phenomena to describe "what exists" with respect to variables or conditions in a situation (Creswell, 2013). The data of this study describe the self-regulated learning strategies and academic performance of college students.

The data were obtained from 290 first year students enrolled in Assumption College of Davao which is a non-profit, non-stock sectarian private school and run by the missionaries of the Assumption. It is located at Juan P. Cabaguio Avenue, Davao City. It is consisting of the Integrated Basic Education Department, the merger of the Elementary and the High School Departments, Senior High School Department and the College Department. Furthermore, Assumption College of Davao houses two other Departments: The Assumption Polytechnic College of Southern Mindanao (APCSM)and the Modified Work and Study Program (MWSP) formerly Sunday High School Education Program (SHSEP). It also has extension elementary schools in Malabog and Kibalatong, Marilog District.

The research participants of this study were the First Year College students" day and evening classes taking up Bachelor of Elementary Education, Bachelor of Secondary Education, Bachelor of Science in Business Administration, Bachelor ofScience in Hospitality Management, Bachelor of Science in Information Technology, and Bachelor of Science in Social. A universal sampling method was used by the researcher in the conduct of this study. The researcher preferred to use the universal sampling technique since the first year college students can provide the useful information to test the hypotheses of this research. The research instrument used by the researcher in the gathering of data were adapted from Pintrich and De Groot (1990) and Huang (2011) but some modification was made to suit the study. The first instrument was used to measure the level of self- regulated learning strategies of the college students. This comprised of 18 items that measure the two indicators which are cognitive strategy use and self-regulation both with nine statements. On the other hand, the second instrument comprised of 20 items measuring the academic performance of college students with four indicators namely academic self-efficacy; achievement motivation; academic engagement; and social engagement each with five statements. The college students were asked to rate each item along a five-point scale ranging from 5 (strongly agree) to 1 (strongly disagree). In the conduct of this study, the researcher secured an approval letter to conduct the study to the dean of college through the approval of the program heads. During the administration of the research questionnaire to the chosen respondents, the

researcher did not experience any form of trouble because of a well-coordinated action plan. The researcher personally administer the survey questionnaire and retrieved it from the respondents and tallied it using Microsoft excel. The statistical tools employed in this study were the following: mean, it is used to measure the level of self-regulated learning strategies and academic performance; pearson r is use to determine the significant relationship of the two variables; and linear regression analysis which is used to determine the significant influence of self-regulated learning strategies towards academic performance of college students.

## RESULT AND DISCUSSION

Presented in table 1 is the level of self-regulated learning strategies of college students with the following domains; cognitive strategy use and self-regulation. The overall mean score accumulated from the responses of the college students is 3.84 with a high descriptive level and with an interpretation that self-regulated learning strategiesis oftentimes practiced by the students. The overall mean score is obtained from the two domains which are cognitive strategy use with a mean score of 4.08 or statistically high telling that college students oftentimes practice cognitive strategies; and the self- regulation which is also practice oftentimes by the college students as it obtained a high mean score of 3.60. With the above result, the standard deviation is .36 signifying that the responses of the college students were not varied thus showing a consistent response.

Table 1. Level of Self-Regulated Learning Strategies of College Students

| Indicator | SD | Mean | Descriptive Level |
|---|---|---|---|
| Cognitive Strategy Use | .45 | 4.08 | High |
| Self-regulation | .44 | 3.60 | High |
| **OVERALL** | **.36** | **3.84** | **High** |

Consequently, this result is congruent to the research conducted by Nilson and Zimmerman (2018) Self-regulated learning is closely related to the way in which students regulate their emotions, behaviors, and environmental aspects during a learning experience. In addition, Alario-Hoyos et al. (2017) mentioned that self- regulated learning is the ability of the learner to control and regulate his own learning through the usage of

cognitive and metacognitive strategies. In similar thought, Spruce and Bol (2015) improving self-regulated learning strategies is possible through teaching activities that encourage students to self-monitor and control their performance. Table 2 shows the level of academic performance of the college students in Assumption College of Davao with these domains; achievement motivation, social engagement, academic self-efficacy, and academic engagement. The table revealed the overall mean score of 3.94 with a descriptive level of high which is interpreted that

Table 2 Level of Academic Performance of College Students

| Indicator | SD | Mean | Descriptive Level |
|---|---|---|---|
| Achievement Motivation | .53 | 4.35 | Very High |
| Social Engagement | .57 | 4.05 | High |
| Academic Self Efficacy | .49 | 3.85 | High |
| Academic Engagement | .67 | 3.52 | High |
| **OVERALL** | **.42** | **3.94** | **High** |

the academic performance among the college students were oftentimes manifested. Looking at the individual mean score of each domain, achievement motivation obtained the highest mean which is 4.35 with a very high descriptive level, indicating that achievement motivation among college students is always manifested. The second highest level among the four domains is social engagement with an accumulated mean score of 4.05 which has a high descriptive level. Furthermore, academic self-efficacy and academic engagement obtained a high level of mean scores of 3.85 and 3.52 respectively which were manifested oftentimes.

The result indicated the same findings of Farooq (2003) that students with better emotional intelligence discovered higher academic performance than the students with low emotional intelligence. In connection, this study support that claim of Sansgiry, Kawatkar, Dutta, and Bhosle (2004) which a high level of academic performance may not always be associated with a high intelligence quotient or hard work. Furthermore, Kuh et al. (2009) insist that academic involvement consist of behaviours and activities such as participating in class discussion, participating in study groups, interacting with faculty, time spent studying, or motivation.

On the other hand, projected in table 3 is the significance on the relationship between self-regulated learning strategies and academic performance of college students in Assumption College of Davao. The overall p-value between self-regulated learning strategies and academic performance is .000 which led to the rejection of the null hypothesis. Data revealed that there is a significant relationship between the two variables, but the r-value showed a moderate correlation since it only obtained

Table 3. Level of Academic Performance of College Students

| *Self-Regulated Learning Strategies* | **Academic Performance** | | | | |
|---|---|---|---|---|---|
| | Academic Self-efficacy | Academic Motivation | Academic Engagement | Social Engagement | **Overall** |
| Cognitive Strategy Use | .232** (.000) | .244** (.000) | .255** (.000) | .303** (.000) | **.345** (.000)** |
| Self-regulation | .211** (.000) | .124* (.036) | .183** (.002) | .125* (.034) | **.213** (.000)** |
| **Overall** | **.270** (.000)** | **.225** (.000)** | **.267** (.000)** | **.261** (.000)** | **.341** (.000)** |

Looking to the singularity of relationship between all domains of two variables, it was found out that there is an undeniable correlation since p-value is less than 0.05 level of significance. Further, cognitive strategy use has an overall .000 p-value with an r-value of .345 showing moderately low correlation, while self-regulation on the other hand have an overall p-value of .000 with an r-value of .213 indicating low correlation. In addition, academic self-efficacy, academic motivation, academic engagement, and social engagement have p-value of .000 with r-values of .270, .225, .267, and .261 correspondingly, signifying low correlation to self-regulated learning strategies. Moreover, focusing on the pairwise correlation between the two domains of self- regulated learning strategies to the four domains of academic performance table 3 showed that cognitive strategy use on academic self-efficacy, academic motivation, academic engagement, and social engagement have a p-value of .000 and an r-values of .232, .244, .255, and .303 respectively. Self-regulation as the second domain of self- regulated learning strategies

obtained a very low correlation to academic self-efficacy, academic motivation, academic engagement, and social engagement as the r-values are .211, .124, .183, and .125. With this finding, it conforms to the postulation of Lambert (2018) that students also need to perform the necessary academic tasks in order to build and maintain academic self-efficacy and students will typically require self-regulation and effective learning strategies in order to perform those academic tasks.

Further, in a dissertation of Dunnigan (2018) it explicitly presented that self- regulated learning strategies could facilitate student success within classes and therefore increase academic self-efficacy; metacognitive concepts and self-regulatory strategies learning tools facilitate the academic success of students. Meanwhile, Pintrich and De Groot (1990) elaborated that cognition and behavior are important aspects of self-regulation with respect to student academic performance. The result is parallel to the study of Puzziferro (2008) that self-regulated learning is a significant predictor of course satisfaction and performance.

Flaunted in table 4 is the significance on the influence of self-regulated learning strategies and academic performance of college students in Assumption College of Davao. The table reveals that among the two domains of self-regulated learning strategies which are cognitive strategy use with .000 level of significance and self- regulation with .070 level of significance. Thus, cognitive strategy use is the best predictor or influence best to the academic performance of the college students. The table also revealed that only 12.9 percent talks about the variable that could influence the academic performance of the college students and the remaining 87.1 percent is notpart of the current study.

Table 4. Significance on the Influence of Self-Regulated Learning Strategies and AcademicPerformance of College Students in Assumption College of Davao

| *Self-Regulated Learning Strategies* | ***Academic Performance*** | | | |
|---|---|---|---|---|
| | *B* | *β* | *t* | *Sig.* |
| Cognitive Strategy Use | .292 | .308 | 5.239 | .000 |
| Self-regulation | .103 | .107 | 1.818 | .070 |
| R | | | | |
| $R^2$ | .359 | | | |
| F | | | | |
| P | .129 | | | |
| | 21.223 | | | |
| | .000 | | | |

With the current findings, Lambert (2018) suggest that developing and implementing self-regulated learning strategies can improve a student‟s academic self- confidence, which in turn can facilitate academic persistence that leads to success and/or graduation. Moreover, affirmed in the study of Zimmerman (2008) that self- regulated learning is regarded as an important competency mediating the academic success of students in most learning environments, as cited and added by Dunnigan (2018) that self-regulated learning involves the self-directive processes and self-beliefs that enable learners to transform their mental abilities into academic skill performance.

Similarly, Wang et al. (2013) and Dunnigan (2018) have investigated the relationship of various self-regulated learning beliefs to academic performance and found that self-regulation does have a relationship to academic performance. Accordingly, in the study of Augustiani, Cahyad, and Musa (2016) also found evidence of the positive relationship between self-efficacy for learning and performance and academic performance. Thus, Schunk (2005) posited that when students are motivated to learn mastery of a concept and seek new challenges, the students are more compelled to use self-regulative, cognitive, and metacognitive strategies, leading to greater understanding and improved academic self-efficacy.

**CONCLUSION**

In the light of this study, the level of self-regulated learning strategies among first year college students is found to be high. This means that the students oftentimes observed self-regulated learning strategies in their own learning. The level of academic performance among the students is high. This also indicates that the domains under academic performance are oftentimes observed by the participants of the study. Moreover, the result also show that there is a significant relationship between self- regulated learning strategies and academic performance, thus the finding rejects thenull hypothesis set in this study. Furthermore, the domain under self-regulated learning strategies that significantly influence the academic performance is the cognitive strategy use. In this case, higher education institution instructors might design classroom activities that allow college students to participate actively in most class learning experiences (i.e. presentation and discussion), discuss ideas from class, give feedback on students‟ performance, and work with students on research project outside of class. Students might work hard and should not focus only on the easy parts of learning, work on practice exercises and answer end of chapter assessments, engage on reading and comprehension and listen to the instructors especially when discussing relevant information.

**REFERENCES**

Agrawal, M., & Nehajul, M. S. K. (2017). Predictors of academic performance: Emotional intelligence and stream among graduate students. *Educational Quest, 8*(3), 743-750. doi:http://dx.doi.org/10.5958/2230-7311.2017.00130.1

Alario-Hoyos, C., Estévez-Ayres, I., Pérez-Sanagustín, M., Carlos, D. K., & Fernández- Panadero, C. (2017). Understanding learners‟ motivation and learning strategies in MOOCs. International Review of Research in Open and Distance Learning, 18(3) Retrieved fromhttps://search.proquest.com/docview/1934063695?accountid=31259

Agustiani, H., Cahyad, S., & Musa, M. (2016). Self-efficacy and self-regulated learning as predictors of students‟ academic performance. The Open Psychology Journal, 9(1), 1-6. http://dx.doi.org/10.2174/1874350101609010001

Azevedo, Roger; Moos, Daniel; Greene, Jeffrey; Winters, Fielding; Cromley, Jennifer. Why is Externally-Facilitated Learning more Effective than Self-Regulated Learning with Hypermedia? Education Technology Research Development, New York, v. 56, p. 45-72, 2008.

Bance, L.O. and B. Acopio, J.R. 2016. Exploring Emotional Intelligence and acadenic performance of Filipino University academic Achievers. International Journal of Psychological Studies.

Bandura, A. (1986). Social foundation of thought and action: A social cognitive theory.Englewood Cliffs, NJ: Prentice-Hall.

Basso, F. P., & Abrahão, M. H.,Menna Barreto. (2018). Teaching activities that develop learning self-regulation. Educação e Realidade, 43(2), 495-512. doi:http://dx.doi.org/10.1590/2175-623665212.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among fiveapproaches. Third edition.* Washington DC: Sage. Retrie ved fromhttps://granolagradschoolandgoffman.wordpress.co

m/2015/09/29/creswell-j-w- 2013-qualitative-inquiry-and-research-design/

Da Fonseca, D., Cury, F., Santos, A., Payen, V., Bounoua, L., Brisswalter, J., . . . Deruelle, C. (2009). When depression mediates the relationship between entity beliefs and performance. *Child Psychiatry and Human Development, 40*(2), 213- 22. doi:http://dx.doi.org/10.1007/s10578-008-0122-9

Dunnigan, J. E. (2018). *The relationship of self-regulated learning and academic risk factors to academic performance in community college online mathematics courses* (Order No. 10786384). Available from ProQuest Central. (2036397928). Retrieved from https://search .proquest.com/docview/2036397928?accountid=31259

Farooq, A. 2003. Effect of Emotional Intelligence on academic performance, Unpublished Thesis, Institute of Clinical Psychology, University of Karachi, Pakistan.

Johnson, B. & Christensen, L. (2008). *Educational research: quantitative, qualitative, and mixed approaches, third edition.*https://books.google.com.ph/books/about/Educational_Research.html?id=8qoaXPh6E4UC&redir_esc=y

Lambert, R. S. (2018). *Assessing the influence of self-regulated learning strategies on academic self-efficacy within a first-year experience workshop* (Order No. 10830306). Available from ProQuest Central. (2075791629). Retrieved from https://search.proquest.com/docview/2075791629?accountid=31259

Lapan, R. T., Kardash, C. A., & Turner, S. (2002). Empowering students to become self-regulated learners. Professional School Counseling, 5(4), 257-266.

Mayer, R. E. (2011). Intelligence and achievement. In R. J. Sternberg., & S. B. Kaufman (Eds.), The Cambridge handbook of intelligence (pp. 748-770). New York: Cambridge University Press.

Mottier, L., Lopez. R., (2015). Collaborative sur les Pratiques de Régulation Formative en Classe: questionnement épistémologique critique. In: BLIN, Dominique (Ed.). Les Recherches-Actions Collaboratives: une révolution de la connaissance. Rennes: Presses de l"EHESP, 2015. P. 57-65.

Paris, S., & Paris, A., (2001). Classroom Applications of Research on Self-Regulated Learning. Educational Psychologist, New York, v. 36, n. 2, p. 89-101, 2001.

Pereira, H. M., (2012). Pedro. Abordagens à Aprendizagem e Autorregulação da Aprendizagem na „História" de Alunos de 9º Ano de Escolaridade. 2012. 130 f. Dissertação (Mestrado em Psicologia) - Faculdade de Psicologia, Universidade de Lisboa, Portugal, 2012.

Perrenoud, P., (1999). Avaliação - da excelência à regulação das aprendizagens: entreduas lógicas. Porto Alegre: Artmed, 1999.

Pintrich P. R., & De Groot, E. V. (1990). Motivational and selfregulated learning components of classroom academic performance. Journal of Educational Psychology, 83(1), 33-40.

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(2), 72-89. http://dx.doi.org/10.1080/08923640802039024

Sansgiry, S. S., Kawatkar, A. A., Dutta, A. P., & Bhosle, M. J. (2004). Predictors of academic performance at two universities: The effects of academic progression. *American Journal of Pharmaceutical Education, 68*(1-5), AQ1-AQ7.Retrieved from https://search.proquest.com/docview/211283180?accountid=31259

Schunk, D. H. (2005). Self-regulated learning: The educational legacy of Paul R.Pintrich. Educational Psychologist, 40(2), 85-94.

Schunk, D. H. (1989), Social cognitive theory and self-regulated learning. In B. J. Zimmerman & D. H. Schunk (Eds.), Self-regulated learning and academic achievement: Theory, research, and practice, (pp. 83-110). New York: Springer-Verlag.

Sigelman, C. K. (1999/ Life-span human development. (3rd ed.). England: Brooks/ColePublishing.

Spruce, R. & Bol, L. Teacher beliefs, knowledge, and practice of self-regulated learning. metacognition and learning , New York, v. 10, p. 245-277, 2015.

Stringer, R. W., & Heath, N. (2008). Academic self-perception and its relationship to academic performance. *Canadian Journal of Education, 31*(2), 327 345. Retrieved from https://search.proquest.com/docview/215372732?accountid=31259

Wang, C., Shannon, D., & Ross, M. (2013). Students‟ characteristics, self-regulated learning, technology self-efficacy, and course outcomes in online learning. Distance Education, 34(3), 302-323. http://dx.doi.org/10.1080/01587919.2013.835779

Zimmerman, B. J. (2008). Investigating self-regulation and motivation: historical background, methodological developments, and future prospects. American Educational Research Journal, Thousand Oaks, v. 45, n. 1, p. 166-183.

Zimmerman, B. J. (2000). Attainment of self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 13-39). San Diego, CA: Academic Press.