15th Edition of the International Conference on Sciences of Education,
Studies and Current Trends in Science of Education, ICSED 2017,
9-10 June 2017, Suceava (Romania)

Studies and Current Trends in Science of Education

Relation between Self-efficacy, Emotional Intelligence, Stress and Academic Performances

Aurora Adina COLOMEISCHI, Daniela – Dumitrita CARSTIUC

<https://doi.org/10.18662/lumproc.icsed2017.15>

How to cite: Colomeischi, A.D., Carstiuc, D.-D. (2017). Relation between Self-efficacy, Emotional Intelligence, Stress and Academic Performances. Clipa (ed.), *Studies and Current Trends in Science of Education* (pp. 129-138). Suceava, Romania: LUMEN Proceedings. <https://doi.org/10.18662/lumproc.icsed2017.15>

© The Authors, LUMEN Conference Center & LUMEN Proceedings.

Selection and peer-review under responsibility of the Organizing Committee of the conference

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited

Relation between Self-efficacy, Emotional Intelligence, Stress and Academic Performances

Aurora Adina COLOMEISCHI¹, Daniela – Dumitrita CARSTIUC²

Abstract

The aim of this research is to see if there is a relation between self-efficacy, emotional intelligence, stress and academic performances. The sample comprises 98 students, both from urban and rural area, with average age between 19 and 32 years old. The instruments used in this study are three questionnaires for evaluation the self-efficacy, emotional intelligence and stress. The results show that there is a strong correlation between self-efficacy and emotional intelligence and higher self-efficacy was linked to lower stress level. There is no significant correlation between self-efficacy and academic performances.

Keywords: *self-efficacy, emotional intelligence, stress, academic performances.*

1. Introduction

Self-efficacy

Self-efficacy is a concept introduced by Albert Bandura in the field of social psychology and represents an important thing of self-regulation behavior. Self-efficacy (Bandura, 1997) is defined as the level of confidence individuals have in their ability to execute a course of action or attain specific performances outcomes.

The beliefs on the capabilities and skills of a student has an influence on the effectiveness which they control their thoughts, emotions, motivations and actions. These have a strong impact on the results of undertaken actions, an important factor in academic success or failure.

Self-efficacy beliefs can be seen in the choices that students make. They involve in tasks where they feel competent and confident and avoid situations where they think they fail. The level of effort, the perseverance and resistance are increasing directly proportional to the level of self-efficacy. Also, the students that have a lower level of self-efficacy perceive

¹ Associate Professor, PhD, Stefan cel Mare University, Suceava, Romania, adina.colomeischi@usm.ro.

² MD Student, Stefan cel Mare University, Suceava, Romania

learning tasks as more complicated than they actually are. Wrong perception about tasks reduce finding solutions for solving problems, which can cause anxiety and depression.

Self-efficacy can be developed by performances outcome, vicarious experiences, verbal persuasion and psychological arousal. These are sources to develop self-efficacy, improve student behavior and performances.

Information from these sources do not affect directly self-efficacy, but the way they are evaluated at the cognitive level (Bandura, 1997). Effectiveness assessment is an inferential process in which a person measures and combines personal contribution and situational factors (Bandura, 1981 by Schunk; D. H.,1991).

Self-efficacy is not a perceived ability but it is „what I think I can do with my abilities in certain conditions” (Maddux, 2009; Schunk & Pajares, 2002). Self-efficacy is not a trait, but it is the belief about the ability to coordinate skills and abilities in order to reach desirable objectives within particular domains and circumstances.

Even when students are aware of the effectiveness of academic performances, effectiveness assessment is not an expression of these performances. (Schunk, 1984 in Schunk, 1985). Although the results from a task have a significant influence on the effectiveness, the success will not guarantee a stronger sense of efficacy, and any failure will not have a negative impact on it. Research has shown that educational practices may moderate the effects of results on the effectiveness (Schunk, 1985).

Individual achievements and general wellbeing increase the feeling about their effectiveness. To persevere in a task requires a strong sense of efficacy.

In the process of optimizing emotional states, are not trying to reduce the intensity of emotions and physical reactions, but the focus is on changing the perception and interpretation stressful situation. Students who have a high level of self-efficacy consider that negative emotions as energizing, which has a positive influence on academic performance. Students who has low confidence in their abilities will consider the same situation as very stressful. The anxiety that appears before an important exam does not necessarily reduce the perception of self-efficacy, but strong emotional reactions can be considered as indicators of success or failure.

Emotional Intelligence

Emotional intelligence is the ability to perceive and express emotions, assimilate emotion in thoughts, understand emotions and regulate their own emotions and those of others (Mayer, Salovey,& Caruso, 2004).

The first approach of the emotional intelligence is promoted by John Mayer and Peter Salovey (1990) and they offer two definitions for the concept, first "the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action" and secondly, „the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth"(p.10).

Reuven Bar-On sets the following components of emotional intelligence: intrapersonal aspect, interpersonal aspect, adaptability, stress management and general mood

D. Goleman (2001) consider that emotional intelligence includes the following structures: self-awareness, self-control, motivation, empathy and social skills.

In academia, the concept of emotional intelligence refers to a student's ability to recognize their emotions, manage them properly, to motivate themselves and to empath other students.

Developing emotional intelligence skills in school is very important because it can positively influence educational outcomes over a period of time (Elias, Brown, Butler, Blum & Schumler 1997 in Hammed & Adenike, 2010)

Emotional intelligence is positively correlated with variables such as empathy, verbal intelligence, extroversion, self-esteem and life satisfaction. High levels of emotional intelligence involves positive relationships with family and peers, very good school results, while a low level of emotional intelligence is associated with aggressive behavior, drug use and school dropout (Abisamra, 2000).

Parker et all (2004) found that emotional intelligence is a predictor of school success. Drago (2004) analyzed the relationship between emotional intelligence and academic success and found that a low level of emotional intelligence correlates with lower academic performance and a high level of EI correlates with high performance.

Stressis "a perceptual phenomenon arising from a comparison between the demand on the person and his ability to cope" (Cox & MacKay, 1976).

Stress is a psychological trait often seen in academia. Authors pointed out that stress is a common element in the life of every individual, regardless of race or cultural background. Studies have shown that stress is a normal reaction of the body to external demands and is manifested by increased heart rate, blood pressure, respiratory rate intensify and increase

blood glucose. These compensatory reactions provide oxygen, nutrients and energy to muscles and vital organs to cope with challenging situations (Nathan, 2002). Nathan argues that prolonged stress can cause psychological distress, which may affect a person's ability to engage in an effective behavior.

Academic performances

The concept of academic performance includes both, the acquisition of knowledge and changes in personality development.

Academic activity requires continuous monitoring of school performance to observe and record the affective changes.

Researchers have identified two meanings of the concept of performance: a) above average results which must reach all students, b) the exceptional results, which are able only 15-20% of the students, in this case we talk about performance.

Performance is defined in two ways: performance is the result of a student after a learning activity, and the second meaning refers to the exceptional results that exceed the level achieved in the usual way.

2. Method

2.1. Research objectives

This research uses a correlational design in which the relationship was established between the variables of the study.

Our study intends to investigate the relation between self-efficacy, emotional intelligence, stress and academic performances. We want to find out if there is a significant correlation between self-efficacy and academic performances. In this study we will identify the general characteristics of self-efficacy, emotional intelligence, stress and academic performances

2.2. The Participants

The sample comprises 98 students from Ștefan cel Mare University, from Suceava country. The sample composition is 23 males and 75 females; 45 students are from urban area and 53 are from rural area; the average is between 19-32 years old.

The sample was performed by indirect selection, subjects belonging to different groups. They were informed about the purpose and objectives of the research, being asked to sign a form of consent, which have agreed to participate in this study. They have also been asked to provide information

on age, gender, place of origin, housing, marital status, number of family members and the average grade of exams.

2.3. The Instruments

The research was done using the questionnaires for investigating the emotional intelligence, the general self-efficacy and stress. The respondents were assured for confidentiality of their responses.

The General Self-Efficacy Scale is developed by Ralf Schwarzer, Gerdamarie S. Schmitz, & Gary T. Daytner (1999) to measure students self-efficacy. The scale comprises 10 items and the respondents are asked to evaluate using a 4-point scale, on which a “1” represented “never” and a “4” represented “always”.

The 33-item emotional intelligence scale is developed by Nicola S. Schutte, John M. Malouff, Lena E. Hall, Donald J. Haggerty, Joan T. Cooper, Charles J. Golden, Liane Dornheim as a measure of emotional intelligence based on the model of emotional intelligence developed by Salovey and Mayer. The questionnaire requires an evaluation based on a Likert 5-point scale, on which a “1” represented “strongly disagree” and a “5” represented “strongly agree,” to indicate to what extent each item described the person.

Perceived Stress Scale (PSS), Cohen, S., Kamarck, T., & Mermelstein, R. (1983). The purpose of this scale is to to assess the degree to which people perceive their lives as stressful.

Subjects indicate how often they have found their lives unpredictable, uncontrollable, and overloaded in the last month.

The instruments used have a good reliability; we verified it through calculating the internal consistency coefficients alpha Cronbach for each scale of every questionnaire. The 33-item emotional intelligence scale has a good reliability 0,87. Also the general self-efficacy questionnaire has a good reliability (0,76), and perceived stress scale (0,69).

The scales were administrated to students in April 2016. The respondents were assured for confidentiality of their responses.

The data were analyzed and interpreted through Spss Program. Analysis is based on items with Likert scale response.

2.4. Results

Hypothesis 1: There is a relationship between self-efficacy and academic performances.

In order to verify this hypothesis we calculated the Pearson correlation coefficient between self-efficacy questionnaire and the average grade of exams.

Based on statistical analyses, there are no statistical significant correlation between self-efficacy and academic performances. (Table 1)

Table 1. Pearson correlation coefficients

Academic Performance	
Self-efficacy	$r=0.013$ $p=0.899$

For the students belonging to the sample we could see that self-efficacy has no influence on academic performances. This means that students may have a high level of self-efficacy and small grades, because the evaluation may be occurred by some errors.

Hypotesis 2: There is a strong correlation between self-efficacy and emotional intelligence

In order to verify this hypothesis we calculated the Pearson correlation coefficient between the self-efficacy questionnaire and the dimensions of The 33-item emotional intelligence scale.

Based on the results, the students` general self-efficacy are correlating significantly with the emotional intelligence. (Table 2)

Table 2. Pearson correlation coefficients

Emotional Intelligence	
Self-efficacy	$r=0.591$ $p=0.000$

Thus we could consider that increasing the level of the emotional intelligence will produce the increasing of the general self-efficacy of the students, so this will contribute to the optimization of the academic performances.

Hypotesis 3: Self-efficacy varies depending on the level of stress

In order to verify this hypothesis we have applied the independent-sample 'T' test between the general self-efficacy and the stress, where dependent variable is self-efficacy and independent variable is stress, with two level, above average value and under average value.

Table 3. The mean, Std Deviation od self-efficacy based on the stress level

		N	Mean	Std. Deviation
Self-efficacy	Stress	51	30.0784	3.64880
	≥ 30.16			

Stress <30.16	47	32.1915	3.79724
------------------	----	---------	---------

Based on the results, students with higher self-efficacy has a lower level of stress, and students with lower self-efficacy has a higher level of stress ($p=0,006$).

Hypotesis 4. Gender has an influence on academic performances

In order to verify this hypothesis we have applied the independent-sample T test using as dependent variable academic performance and as independent variable the gender.

Based on the results there is a significant difference in terms of gender, so the female students have higher academic achievement than the male students ($t(96)= 2,885$, $p= 0,005$).

Table 4. The mean, Std Deviation for academic achievement based on gender

		N	Mean	Std. Deviation
Academic performances	Gender			
	male	23	7.9926	0.93456
	female	75	8.6820	1.02201

3. Discussions

There are discussion regarding the relation between students' self-efficacy and the metacognitive competence, and previous studies revealed that the metacognitive competence could predict the level of the academic performance (Stanciu & Ignat, 2006) and also using some tools for enhancing metacognition skills and self-efficacy could also contribute to better academic achievement (Clipa, Ignat, Stanciu, 2012). The present study did not find out any correlation between self-efficacy and academic performance, even if in the literature there is a good correlation and self-efficacy is considered as a good predictor for academic performance (Lane & Lane, 2001) There are similar studies which demonstrated that there are a good correlation between self-efficacy, emotional intelligence and academic performance (Yazici, Seyisa, & Altuna, 2011). Our study found out an interesting result, that there are gender differences regarding academic

performance. Other studies found that are such differences but emphasize that male students have better academic achievement on technology and female students are better in humanistic and arts (Demirbas & Demirkan, 2007).

Taking into account the relation between self-efficacy and stress experienced by students our study obtained similar results as other studies that showed lower self-efficacy was significantly associated with the stress of school performance and lower academic self-efficacy was also significantly associated with higher stress of financial pressure (McKaya, Dempsterb & Byrnec, 2014).

Our findings related to the relation between self-efficacy and students' emotional intelligence are consistent with others that show a correlation between the two factors and also, the possibility to be increased through training (Pool & Qualter, 2012; Ignat, 2011).

4. Conclusions

Based on the statistical analysis some of the hypothesis were confirmed and other not.

Concerning the relation between self-efficacy and academic performances there is no correlation between these two variables. Self-efficacy has no influence on academic performances on this sample.

Concerning the relation between self-efficacy and emotional intelligence a positive correlation was revealed. Higher self-efficacy was linked to higher emotional intelligence. The results of this study suggest a link between emotional intelligence and self-efficacy beliefs in students. Thus we could consider that the emotional intelligence has a main contribution to the academic performances.

Concerning the relation between self-efficacy and stress a negative correlation was revealed. Higher level of self-efficacy was linked to lower level of stress, and lower level of self-efficacy was linked to higher level of stress.

Gender has an influence on academic performances, so the female students have higher academic achievement than the male students.

This study is limited due to the use of self-report measures to assess the self-efficacy, emotional intelligence and stress. There is a difficulty of generalizing on the basis of data obtained from a specific sample of students from one university.

In a future research it will be interesting to investigate a relation between self-efficacy, emotional intelligence, stress and academic

performances on a more representative sample of Romanian students from different school levels. Also to investigate the relation between self-efficacy and a specific task, as solving problems, finish a project.

References

- Abisamra, N. (2000). The relationship between Emotional Intelligence and Academic Achievement in Eleventh Graders. *Research in Education. FED*, 620-661
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New-York: W.H. Freeman.
- Clipa, O., Ignat, A.A., Stanciu, M. (2012). Learning diary as a tool for metacognitive strategies development. *Procedia – Social and Behavioural Sciences*, 33, 905 – 909.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of perceived Stress in *Journal of health and Social behavior*, vol.24, no.4, 385 - 396
- Cox, T., & Mackay, C. (1976). *A psychological model of occupational stress*. Retrieved http://changingminds.org/explanations/stress/cox_mackay_stress.htm
- Demirbas, O., Demirkan, H. (2007). Learning styles of design students and the relationship of academic performance and gender in design education. *Learning and Instruction*, 17, 345-359.
- Drago, J. M. (2004). The relationship between emotional intelligence and academic achievement in nontraditional college students. Doctoral Dissertation, Walden University
- Goleman, D. (2001). *Inteligența emoțională*. București: Curtea Veche.
- Hammed, A., Adenike, E., (2010). Emotional Intelligence and self-efficacy as determinants of academic achievement. *Ife Psychologia*, 18(1).
- Ignat, A. A. (2011). Strategii și programe de consiliere pentru dezvoltarea copiilor cu aptitudini înalte: demersuri investigative, București, Editura Didactică și Pedagogică.
- Lane, J. & Lane, A. (2001). Self-Efficacy and Academic Performance. *Social Behavior and Personality*, 29(7), 687-694.
- Maddux, James. (2009) Self-Efficacy: The Power of Believing You Can in Shane J. Lopez and C.R. Snyder (ed) [*The Oxford Handbook of Positive Psychology \(2 ed.\)*](#)
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15, 197-215.
- McKaya, M., Dempster, M. and. Byrnes, D.G. (2014). An examination of the relationship between self-efficacy and stress in adolescents: the role of gender and self-esteem. *Journal of Youth Studies*, 17 (9), 1131–1151.
- Parker, J.D.A., Summerfeldt, L.J., Hogan, M.J., & Majeski, S. (2004). Emotional intelligence and academic success: Examining the transition from high school to university. *Personality and Individual Differences*, 36, 163-172.
- Pool, L. D., Qualter, P. (2012). Improving emotional intelligence and emotional self-efficacy through a teaching intervention for university students. *Learning and Individual Differences*, 22, 306–312.

- Salovey, P. & Mayer, J.D. (1990). Emotional Intelligence, imagination, cognition, and personality, Baywood Publishing Co., pp. 185-211
- Schwarzer, R., Gerdamarié, S., Schmitz, and Gary, T.D. (1999). "Teacher Self - efficacy." <http://web.fu-berlin.de/gesund/skalen>
- Schunk, D.H. (1985). Self-efficacy and classroom learning. *Psychology in the Schools*, 22(2), 208-223.
- Schunk, D. (1991). Self-Efficacy and Academic Motivation, in *Educational Psychologist*, vol. 26, 2017 – 231.
- Schunk, D., Pajares, F. (2002). The Development of Academic Self-Efficacy in A. Wigfield & J. Eccles (Eds.), *Development of achievement motivation*
- Schutte, N., Malouff, J. M., Hall, L., Haggerty, D., Cooper, J., Golden, C., & Dornheim, L. (1998) Development and validation of a measure of emotional intelligence, in *Personality and Individual Differences*, 25, 167-177.
- Stanciu, M., & Ignat, A.A. (2006). La formation de la compétence métacognitive aux étudiants de la Ière année. *XXIIIe Congrès de l'AIPU Innovation, Formation et Recherche en Pédagogie*.
- Yazici, H., Seyisa, S., & Altuna, F. (2011). Emotional intelligence and self-efficacy beliefs as predictors of academic achievement among high school students. *Procedia Social and Behavioral Sciences*, 15, 2319–2323.