

# PREDICTING STUDENT'S SELF-COMPETENCE USING SCHOOL CULTURE FACTORS

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## Abstract

*Numerous studies in educational psychology field investigate academic achievement as well as factors influencing it. Generally, these studies are addressed to cognitive factors but non-cognitive factors, also play an important role in academic success. Presented paper deals with identification the factors associated to students' self-competence, specifically, sense of success and happiness. 224 public schools 9<sup>th</sup> grade (age 15-16) 5385 students (2655 girls and 2683 boys) were administered with the questionnaire consisted of several blocks: parents involvement in school life, class climate and school culture. Result shows that the best predictors for sense of success in school environment are: parent involvement in academic life, parent learning attitudes, their belief of child's success coping with academic problems, teaching style of teacher, specifically, problem based teaching. The best predictors for student sense of happiness are: student's self-perception of dealing with problem and involvement in learning processes. The study has implication for school teachers and experts of educational psychology.*

**Key words:** *self-competence, sense of success, sense of happiness, school culture.*

## Introduction

Generally, it is often thought, that academic success depends on inherent talent, skills and intelligence, as measured by a standard IQ tests, but non-cognitive factors also play an important role in academic achievement. Such factors are student's self-esteem (Canfield, 1976, Nave, 1990), self-efficacy (Choi, 2005; Bong, 2001; Pajares & Schunk, 2001; Zimmerman, 2000, Vuong, Brown-Welty, & Tracz, 2010), Self-perception and self-competence (Wilkinson, 2004).

It should be mentioned that terms of self-efficacy, self-esteem, self-perception, self-concept and self-competence are often used interchangeably in the literature (Wilkinson, 2004). The term of Self-competence was developed by Susan Harter (1982). It generally refers to perceptions of ability in broad academic areas, such as how good of a student one is in general, while the definitions of competence primarily refer to a state of being adequately qualified to perform a task. Competence can be conceptualized in terms of knowledge, abili-

ties, skills and attitudes displayed in the context of a set of realistic professional tasks (Hager & Gonczi, 1996) Self-competence may also refer to perceived ability in subject areas as a whole. This makes the definition very similar to self-concept. However, while self-concept also addresses students' beliefs about academic difficulties and student affect, self-competence refers only to their perceptions related to success (Wilkinson, 2004). A student's confidence, commonly referred to as a state of being certain about something, is rooted in his or her perceived self-efficacy (Pollack, and Lilly, 2008). According A. Bandura "self-efficacy" is a judgment "of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1995) or a "conviction that one can successfully execute the behavior required to produce the outcome" (Bandura, 1977). In other words, self-efficacy is a person's belief in his or her ability to succeed in a particular situation, like self-competence, it is concerned only with perceptions of being able to use skills to be successful (Wilkinson, 2004). Students with high self-efficacy will set higher achievement goals for themselves (Zimmerman, Bandura, & Martinez-Pons, 1992), and when they are working, they tend to be more task-oriented than children with low self-efficacy. Atkinson (1964) stated that for students with low self-competence, the potential for failure outweighs the potential for success, so they do not engage in work. They miss the opportunity to experience success and consequently believe their potential for success can outweigh their potential for failure (Wilkinson, 2004). So, it's very crucial for student's academic success and achievements to identify the factors that help them develop self-competence.

The goal of the study is to investigate the school culture factors influencing student's self-competence. Specific predictions of the study were the following:

- a) If there is correlation between parent's involvement and self-competence, then high level of parent's involvement should be correlated with high level of self-competence.
- b) If there is correlation between teaching style and self-competence, then problem oriented teaching style should be correlated with high level of self-competence.
- c) If there is correlation between classroom climate and self-competence, then positive class climate should be correlated with high self-competence.
- d) If there is correlation between school culture and self-competence, then positive school culture should be correlated with high self-competence.

The research purpose is identification of school culture factors predicting student's self-competence and measuring their predictive value in this process.

## **Methodology of Research**

### *Participants*

224 public schools participated in the study. The schools were randomly selected from the capital as well as from different regions of Georgia. There were used stratified and one step cluster sampling in the study. The strata were divided by following criteria: region, settlement type and size of school. After respondents distribution in strata the school selection was made using the principle of systemic random selection. 5385 students of 9<sup>th</sup> grade (age – 15/16 years, 2655 girls and 2683 boys) participated in the research, as the presented study is part of national assessment, the number of students is large (10% of total Georgian 9<sup>th</sup> grade students population). The reason of selecting the 9<sup>th</sup> grade is that this is the last and conclusive stage of basic mandatory education in the country and from development point of view this is the very vulnerable stage and non-cognitive factors, such as self-competence sense of success and happiness are very important.

### *Procedure*

The study was conducted at National Curriculum and Assessment Center of Ministry of Education and Science of Georgia. The students filled in questionnaires after the National assessment in Georgian language and literature. The standard instruction and samples were provided at the beginning of the questionnaire to help students complete the questionnaire. Students who participated in the study were volunteers.

### *Instrument*

The students were administered with the questionnaire consisted of several blocks: demographic information about the student, students self-competence (specifically, sense of success and happiness); parent's involvement in school life and attitude towards learning (frequency of parent's contact with teacher, parent's help and advices towards learning and future) besides these factors questionnaire assess classroom climate (classroom harmony and friendliness) and school culture ("the beliefs, attitudes, and behaviors which characterize a school") (Phillips, & Wagner, 2003).

Results were analyzed using standard multiple regression in SPSS.17.

## **Results of Research**

Results revealed statistically significant gender difference in self-competence. Specifically, girls have higher level of self-competence ( $M = 0.068$ ,  $SD = 0.85$ ), than boys ( $M = -0.067$ ,  $SD = 1.13$ ),  $t(5335) = 4.94$ ,  $p < .000$ .

Study results showed that sense of success correlates with family involvement in child school life ( $r(5338) = .076$ ,  $p = .000$ ). The significant predictors for self-competence is the frequency of parent's contact with teacher ( $R^2_{ADJ} = .05$ ,  $F(9, 5328) = 33.65$ ,  $p = .000$ ) ( $\beta = .06$ ,  $p = .000$ ).

Self-competence positively correlates with what importance the parents give to their child's education ( $r(5338) = .22$ ,  $p = .000$ ) and negatively correlates with the frequency of parents help in homework ( $r(5338) = -.03$ ,  $p = .000$ ).

Parents' attitude towards learning is predictor for students' sense of success ( $R^2_{ADJ} = .06$ ,  $F(6, 5331) = 55.37$ ,  $p = .000$ ), specifically, how understandable is learning related advices ( $\beta = .064$ ,  $p = .000$ ) and belief in child's success when coping with academic problems ( $\beta = .18$ ,  $p = .000$ );

Relationship with parents was also predictor for sense of success but significant predictors from relationship factors ( $R^2_{ADJ} = .05$ ,  $F(6, 5331) = 35.38$ ,  $p = .000$ ) were sharing the school impressions with parents ( $\beta = .13$ ,  $p = .03$ ), talking with parents about how to control emotions ( $\beta = -.05$ ,  $p = .03$ ), talking with parents about how to become successful ( $\beta = .078$ ,  $p = .00$ ).

There was a positive relation between students sense of success and general opinion about school (the school makes possible to get the perfect knowledge) ( $r(5338) = .06$ ,  $p = .000$ ).

Factors related to teacher ( $R^2_{ADJ} = .048$ ,  $F(12, 5337) = 23.54$ ,  $p = .000$ ) were also significant predictors for sense of success: specifically, ambiguity of teacher's advices ( $\beta = -.086$ ,  $p = .000$ ) and fairness ( $\beta = .043$ ,  $p = .005$ ).

Another significant predictor for success is, teaching style, specifically, problem based teaching ( $R^2_{ADJ} = .07$ ,  $F(5, 5335) = 77.36$ ,  $p = .000$ ) ( $\beta = .09$ ,  $p = .000$ ). Also, teaching strategies

( $R^2_{ADJ}=.19$ ,  $F(10,5327)=129.50$ ,  $p=.000$ ) were significant predictors, specifically, clearness about what the teacher requires for performing specific tasks ( $\beta = .06$ ,  $p=.000$ ); if the grade criteria are obvious ( $\beta = .16$ ,  $p=.000$ ); if the students have possibility to express their ideas freely ( $\beta = .06$ ,  $p=.000$ ); and if the teacher gives homework which requires using internet ( $\beta = .13$ ,  $p=.000$ ) and library ( $\beta = .14$ ,  $p=.000$ ).

There was positive relationship between sense of success and anxiety level that is related to success. Students with high level of self-competence worry more about the success ( $r(5338) = .24$ ,  $p=.000$ ) than students with low self-competence.

How children behave during the lesson ( $R^2_{ADJ}=.16$ ,  $F(6, 5331) =169.159$ ,  $p=.000$ ), was a significant predictor for sense of success: attentively listening to the teacher ( $\beta=.19$ ,  $p=.000$ ); organizing and categorizing the new information ( $\beta = .17$ ,  $p=.000$ ); just sitting quiet ( $\beta=-.06$ ,  $p=.000$ ); asking questions ( $\beta=.07$ ,  $p=.000$ ).

The reasons why students are doing homework were also associated with the sense of success. Specifically, doing homework to avoid teacher's anger ( $r(5338) = .11$ ,  $p=.000$ ); to make teacher think that she/he is a good student ( $r(5338) = .16$ ,  $p=.000$ ); to do it just for pleasure ( $r(5338) = .29$ ,  $p=.000$ ) and for fun ( $r(5338) = .26$ ,  $p=.000$ ). But from these factors the predictive validity has the following one: if the students have fun doing their homework ( $R^2_{ADJ}=.09$ ,  $F(4, 5333) =135.59$ ,  $p=.000$ ), ( $\beta=.21$ ,  $p=.000$ ).

The self-perception factors ( $R^2_{ADJ}=.20$ ,  $F(6,5331)=226.639$ ,  $p=.000$ ) were also significant predictors for sense of success: how independent feels himself/herself the student to be ( $\beta=.094$ ,  $p=.000$ ); how good is the student at social relationships ( $\beta=.049$ ,  $p=.000$ ); how actively is he/she engaged in academic processes ( $\beta=.15$ ,  $p=.000$ ); how motivated is the student ( $\beta=.27$ ,  $p=.000$ ).

There was significant correlation between the learning pressure level and sense of competence ( $r(5338) = .34$ ,  $p=.000$ ). Successful students can deal with academic problems without pressure.

Results showed that there is difference in happiness between girls and boys. Particularly, boys perceive themselves happier ( $M = 2.06$ ,  $SD = 1.82$ ) than girls ( $M = 1.68$ ,  $SD = 1.17$ ),  $t(5335) = -9.19$ ,  $p < .000$

The significant predictors for students happiness are self-perceptions ( $R^2_{ADJ}=.02$ ,  $F(6, 5331) = 21.41$ ,  $p = .000$ ), specifically, depending on if students think themselves capable of solving problems ( $\beta = .024$ ,  $p=.002$ ) and how actively the students are involved in academic process ( $\beta = .045$ ,  $p=.002$ ).

Parents involvement was also significant predictor for happiness ( $R^2_{ADJ}=.04$ ,  $F(2, 5335) =9.95$ ,  $p=.000$ ). Frequency of talking with parent about the school events ( $\beta = -.055$ ,  $p=.001$ ) and talking about how to cope with problems in social relationship with peers ( $\beta = .055$ ,  $p=.002$ ).

Results showed that frequency of school's cultural activities (excursions, guest speakers, discussion of school behavioral rules) positively correlated with sense of happiness ( $R^2_{ADJ}=.05$ ,  $F(2, 5335) =33.44$ ,  $p=.000$ ), specifically, frequency of excursions ( $\beta = .022$ ,  $p=.000$ ), art performance activities ( $\beta = .025$ ,  $p=.01$ ), talking with each other in the classroom about life themes ( $\beta = .025$ ,  $p=.05$ ).

The results showed adaptation with school environment was the predictor for happiness ( $R^2_{ADJ}=.06$ ,  $F(9, 5328) = 42.88$ ,  $p=.000$ ), specifically, how easily one can make friend ( $\beta = .063$ ,  $p=.000$ ), if the student feels herself/himself as a part of the school ( $\beta = .12$ ,  $p=.000$ ).

Results revealed that optimistic view about the future was positively correlated happiness ( $r(5338) = .08$ ,  $p=.000$ ) and with sense of happiness ( $r(5338) = .34$ ,  $p=.000$ ).

## Discussion

As result showed girls feel more successful in general, than boys, but boys are happier than girls, as research literature (Eccles, Lord, Roeser, Barber, & Jozefowicz, 1997; Halpern, 2000; Jacobs, 2002, 2005; Linver, Davis-Kean, & Eccles, 2002; Weiman, 2004) shows there is gender difference for objective success in specific subjects and generally girls are more successful in humanities while boys are more successful in math. Our study was conducted after the assessment in Georgian language and literature, because of which questions mostly were connected to Georgian language, so it's not surprisingly that girls have high level of self competence, than boys because in reality girls are more successful in languages than boys. Low level of happiness may be related to girls' anxious nature, as girls are always more worried about the school related issues than boys

Results showed that there is correlation between factors related to parent's and students' self-competence. Such factors are: parents' attitude towards learning and school, their involvement in child's academic life, their expectations regarding children's success. Result showed that parent's involvement is important for student's happiness as well as for student's sense of success. High level of parent's involvement correlated with high level of self-competence. Parents' beliefs regarding how their children can cope with academic problems positively correlated with students' self-esteem, which proves once more, that parents are important people playing an important role in developing children's self-esteem.

There was significant association between self competence, happiness and school related factors: teacher, classroom climate and school culture. Teaching style, problem oriented teaching style and teacher fairness was correlated with high level of self-competence. Classroom climate positively correlated with student's self-competence. There was correlation between school culture and self-competence, positive school culture was correlated with high self-competence.

The school, classroom, teacher are very important factors. It's natural that in the environment where the rules are defined clearly, when teacher is fair, student knows what she/he should do, what is obligatory and when everything is anticipated, the social relationship between students are positive, there are many art and social activities at school students feel themselves more successful and happy.

## Conclusions

Result showed that there is correlation between parent's involvement and self competence - high level of parent's involvement was correlated with high level of student's self-competence. Result showed that parent's involvement is also important for student's happiness. Such parental involvement factors are: parents' attitude towards learning and school, their participation in child's academic life, their expectations regarding children's success.

Result showed that there was gender difference regarding the student's sense of success and happiness. In general, girls feel more successful, than boys, but boys are happier than girls.

There was significant association between self competence, happiness and school related factors: teacher, classroom climate and school culture. There was correlation between teaching style and self-competence, specifically, problem oriented teaching style was correlated with high level of self-competence. Teacher fairness was also correlated with high level of self-competence. Results also revealed that there is correlation between classroom climate and self-competence, specifically, positive class climate was correlated with high self-competence. Result showed there is correlation between school culture and self-competence; positive school culture was correlated with high level of student's self-competence.

The best predictors for student sense of happiness are: student's self-perception of dealing with problem and involvement in learning processes.

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