



## Research Paper

# Relationship Between Social Skills and Critical Thinking with the Mediating Role of Self-Efficacy



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### Abstract

The aim of this study was to investigate the relationship between social skills and critical thinking with the mediating role of students' self-efficacy. The present study is a descriptive correlational study according to the nature of the subject and the intended subject. The statistical population of this study was all female high school students in Meshkinshahr. A total of 300 students were selected by simple random sampling. The data collected from the implementation of the questionnaire have been statistically analyzed. First, descriptive statistics (mean and standard deviation) were used to summarize and describe the demographic factors, and in the second part, inferential statistics were used to test the hypotheses to examine the research question and hypotheses. Takes statistical analysis to ensure compliance. Research instruments included Scherer et al.'s (1982) General Self-Efficacy, Ritz's (2003) Critical Thinking Questionnaire, and Matson's (1983) Social Skills Questionnaire. For data analysis, Pearson correlation with SPSS software and structural equation modeling with Emus software were performed. The results of Pearson correlation coefficient showed that there is a relationship between social skills and self-efficacy with critical thinking. And there is a relationship between social skills and self-efficacy. The structural equation model was also a good fit.

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## Introduction

In today's changing age, education must also pay attention to the different needs of students and society in a dynamic and flexible manner, and also review procedures and curricula. Use of traditional teaching and learning methods; That is, the passive position of learners in the educational environment and relying on filling the mind with information, will no longer meet the educational needs of the present and future generations, and for the correct training of learners, they need to think freely, creatively, critically, scientifically educational centers should transfer intellectual order to learners, involve students in the problem and analyze it (Yarmohammadi, Noshadi, Maghami, & Bahrami, 2016). Ennis (2015) believes that one of the main goals of education should be to train thinking people. Emir (2009) considers critical thinking as an important tool in problem solving and states that this mental power includes the seven components of curiosity, open mind, regularity, analytical, rational action, self-confidence and assertiveness. Critical thinking is a valuable skill for dealing with mental health problems and illnesses, and to a large extent avoids and even facilitates dealing with social problems (Huang et al., 2015).

One of the variables affecting critical thinking is social skills. In a holistic sense, social skills are tools that enable people to communicate, learn, seek help, meet their needs in appropriate ways, collaborate with others, make friends, build healthy relationships. Develop, recognize their strengths and weaknesses in society, take care

of themselves, and generally be able to interact with society in a balanced way (Dowd & Tierney, 2005). Social skills play a role in many functional areas of a person's life, such as self-efficacy, high self-esteem, positive self-concept, the amount and quality of happiness, positive behavior, and life satisfaction. In fact, the acquisition of social skills is the main axis of social transformation, the formation of social relationships, improving the quality of social interaction, self-efficacy and mental health in general (Teodoro, K  ppler, de Lima Rodrigues, de Freitas, & Haase, 2005). Most psychologists believe that social skills are a set of learned and acceptable behaviors that enable a person to have an effective relationship with others and avoid unreasonable social reactions (Jenaabad, 2017; Sobhi, 2016). Cartledge and Milburn (1986) define social skills as: learned and socially accepted behaviors that lead to reciprocal communication and lead to positive responses and avoidance of negative responses (Beh-Pajooh, Soleymani, Ali Afrooz, & Gholamali Lavasani, 2010; Rezayi, 2017). According to some experts, critical thinking includes the main elements of communication such as reading, writing, speaking and listening, so it is effective in social activities and especially human interactions (Safarinia, Zare, & Hasani, 2013).

One of the variables affecting critical thinking and the mediating variable is the self-efficacy variable. This concept is a kind of self-esteem that affects the amount of effort

and perseverance in dreaming with deterrents in decisions, and ultimately in mastering behavior. One of the important features of self-efficacy is to relate to the skills that the person enjoys, but reflect what people believe and can do with their own skills (Hsu & Chiu, 2004; Mafla, Divaris, Herrera-López, & Heft, 2019). The theory of self-efficacy is rooted in Bandura's social cognitive theory (Bastable, 2021) and is of particular importance in educational settings; Because according to Bandura, such environments are suitable for the growth and formation of self-efficacy (Bandura, Rumsey, Walker, & Harris, 1994). Ideas of self-efficacy also affect selection, effort, resistance, performance, and tendency to critical thinking (Peiman & Peiman, 2011). Self-efficacy beliefs are defined as individuals' judgments about their ability to perform at designed levels of performance (Sang, Valcke, Van Braak, & Tondeur, 2010). Self-efficacy beliefs as one of the constructs explaining motivation can be studied in the field of thinking, especially critical thinking. Self-efficacy affects the ability to adapt and cope with difficult situations, as well as critical aspirations and thinking, and protects the individual in the face of failure (Nicolaou & Philippou, 2007). According to Fisher (2011), individuals' decision-making and gaining insight through thinking will lead to logical and real results, and any situation in correct decision-making will lead to an increase in self-efficacy. Beliefs of self-efficacy as one of the constructs explaining motivation can be studied in the field of thinking, especially critical thinking (Mohammadi Nezhad Ganji, Salimi, & Farhadi Varmar Abadi, 2020). Also, the

components of critical thinking affect self-efficacy except in a few components (Motaghi, Najafi, Nosrati Heshi, & Hatami, 2018). Gloudemans, Schalk, and Reynaert (2013) examined the relationship between critical thinking skills and self-efficacy beliefs. The results of this study showed that there is a close relationship and two-way relationship between these variables. Ennis (2015) in a study showed that students who get high scores in the critical thinking test, generally get high scores in the tests of creativity, self-efficacy and self-confidence.

### **Literature Review**

In a study by Soleimanpouromran and Alizadeh (2020) with the aim of predicting the relationship between participatory learning, creative thinking and critical thinking with social skills, students of the University of Medical Sciences concluded that there is no relationship between critical thinking and social skills. In a study by Issanejad and Ghabadizade (2018) with the aim of investigating the structural relationship between parental supervision and critical thinking with adaptation and self-efficacy of high school students concluded that there is a relationship between critical thinking and self-efficacy. In a study by Hamidi, Jalali Farahani, and Rajabi (2018) with the aim of explaining the relationship between social skills, self-efficacy, lifestyle and Internet addiction in student-athletes, they concluded that there is a relationship between social skills and self-efficacy. In a study by Shahrakni Mousavi, Abbasi, and Gramipour (2019) with the aim of the effect of teaching critical thinking skills on the development of

social skills and cognitive skills concluded that the teaching of critical thinking skills has an effect on social skills. In a study by Khosravi and Jahangiri (2019) with the aim of the effect of social skills training on student self-efficacy, teachers of Farhangian University concluded that social skills training has an effect on self-efficacy. In a study by Orujlu and Hemmati Maslakpak (2017) with the aim of investigating the relationship between critical thinking and self-efficacy, nursing students concluded that there is a relationship between critical thinking and self-efficacy. In a study by Jenaabadi and Mehdizade (2015) aimed at the effect of teaching critical thinking on the development of social skills of medical students concluded that the teaching of critical thinking has an effect on the development of social skills. In a study by Jafaripanj, Rahmanian, and Zare (2018) with the aim of the effectiveness of critical thinking training based on the Powell-Alder model in cognitive distortions and adolescent self-efficacy, they concluded that critical thinking training has an effect on self-efficacy. In a study by Shamsi and Amiranzadeh (2017) with the aim of mediating the role of self-efficacy in the relationship between personality traits and social skills, they concluded that there is a significant direct relationship between self-efficacy and social skills. In a study by Asghari (2015) with the aim of investigating the relationship between computer experience and social skills with self-efficacy blind students concluded that there is a relationship between social skills and self-efficacy. In a study by Abolghassemi, Poorkord, and

Narimani (2010) with the aim of linking social skills and self-efficacy with the tendency to use drugs in adolescents concluded that there is a relationship between social skills and self-efficacy.

## **Research Method**

The present study is a correlational description according to the nature of the subject and the intended objectives. The statistical population of this study was all female high school students in Meshkinshahr. A total of 300 students were selected by simple random sampling.

Data collected from the questionnaires were statistically analyzed. First, descriptive statistics (mean and standard deviation of variables) were used to summarize and describe the data of demographic factors, and in the second part, inferential statistics were used to test the hypotheses to examine the research question and hypotheses to ensure that statistical data are analyzed after ensuring their observance.

### **Research tools**

**General Self-Efficacy Questionnaire (GSE):** This questionnaire was designed by Scherer et al. (1982) to measure general self-efficacy. This questionnaire has 17 items and measures the subjects' self-efficacy expectations at three levels: desire to initiate behavior, continued effort to complete behavior, and resistance to encountering obstacles. Scoring is based on a five-point Likert I strongly disagree (1), I disagree (2), I disagree (0), I agree (3), I totally agree (4). The highest self-efficacy score will be 85 and

the lowest score will be 17. Higher scores indicate greater and stronger self-efficacy. Sherer et al. (1982) credits calculated through Cronbach's alpha for general self-efficacy has mentioned. In a research, the coefficient of validity through halving 0.85. And Cronbach's alpha 0.85. It has been reported (Najafi, 2008).

Rectes Critical Thinking Questionnaire: This questionnaire was prepared by Rectes (2003). This scale has 33 questions and includes 3 subscales. The first part contains 11 questions to measure the creativity scale, the second part contains 9 questions about the maturity scale and the third part contains 13 questions for the commitment scale that the subject answers based on the Likert 5-choice scale from strongly agree to strongly disagree. Biabangard (2008) In order to obtain validity in its research, the correlation coefficients between the scores of the subjects in two

Finding

Table 1 presents the descriptive indices of the variables including mean, standard

shifts, namely test and retest for all subjects, female subjects and male subjects, respectively ( $r = 0.77$ ), ( $r = 0 / 88$ ) and ( $r = 0.67$ ) which is satisfactory.

Social Skills Questionnaire: Matson Social Skills Questionnaire (1983) This questionnaire has 56 questions and its purpose is to assess social skills from different dimensions (appropriate social skills, non-social behaviors, aggression and impulsive behaviors, superiority, high self-confidence Having a relationship with peers). This questionnaire is based on the Likert scale (strongly disagree 1; disagree 2; have no opinion 3; agree 4; strongly agree 5). In the study of Yousefi and Khayyer (2002), the construct validity of this questionnaire was confirmed and five factors were obtained, as well as the reliability of the questionnaire or its reliability using the Cronbach's alpha measurement method 0.86 Calculated.

deviation. Table 2 presents the correlation matrices of the research variables.

Table 1- Mean and standard deviation of variables

Variables	Average	Standard deviation
Social skill	202.2500	35.42368
Critical Thinking	118.8567	22.52006
Efficacy	61.2667	12.61504

Investigation of research questions: In this section, research hypotheses were tested using Pearson correlation tests and structural equation modeling. Pearson correlation test

was used to analyze the first research question.

1. Is social skill related to critical thinking?

2. Is self-efficacy related to critical thinking?
3. Is social skill related to self-efficacy?

**Table 2- Pearson correlation coefficients to investigate the relationship between social skills, critical thinking and self-efficacy**

Variables	Social skill	Critical Thinking	Efficacy
Social skill	1		
Critical Thinking	0.388	1	
Efficacy	0.295	0.814	1

According to Table 2, the relationship between social skills (0.388), self - efficacy (0.814) with positive critical thinking and at the level of 0.001. It is meaningful. The relationship between social skills and self-efficacy (0.295) and at the level of 0.001. It is meaningful.

4. Is there a relationship between social adjustment and attachment style with

resilience with the mediating role of academic performance?

Structural equation modeling with Emos software was used to investigate the relationship between social skills and critical thinking with the role of mediating self-efficacy.

**Table 3- Abbreviations used for model variables**

Variables	Symbol
Appropriate social skills	Xx1
Antisocial behaviors	Xx2
Aggression and impulsive behaviors	Xx3
Supremacy, high self-confidence	Xx4
Relationships with peers	Xx5
Creativity	Yy1
Growth	Yy2
Obligation	Yy3
The desire to initiate behavior	Zz1
Resistance to obstacles	Zz2
Trying to complete the behavior	Zz3
Social skills	F1
Critical Thinking	F3
Efficacy	F2



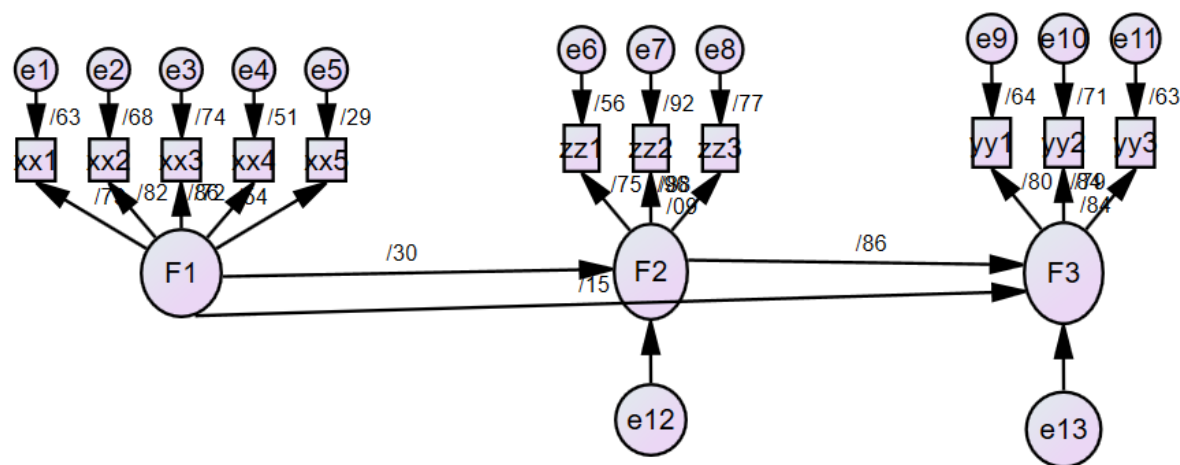


Figure 1- Standard model before modification

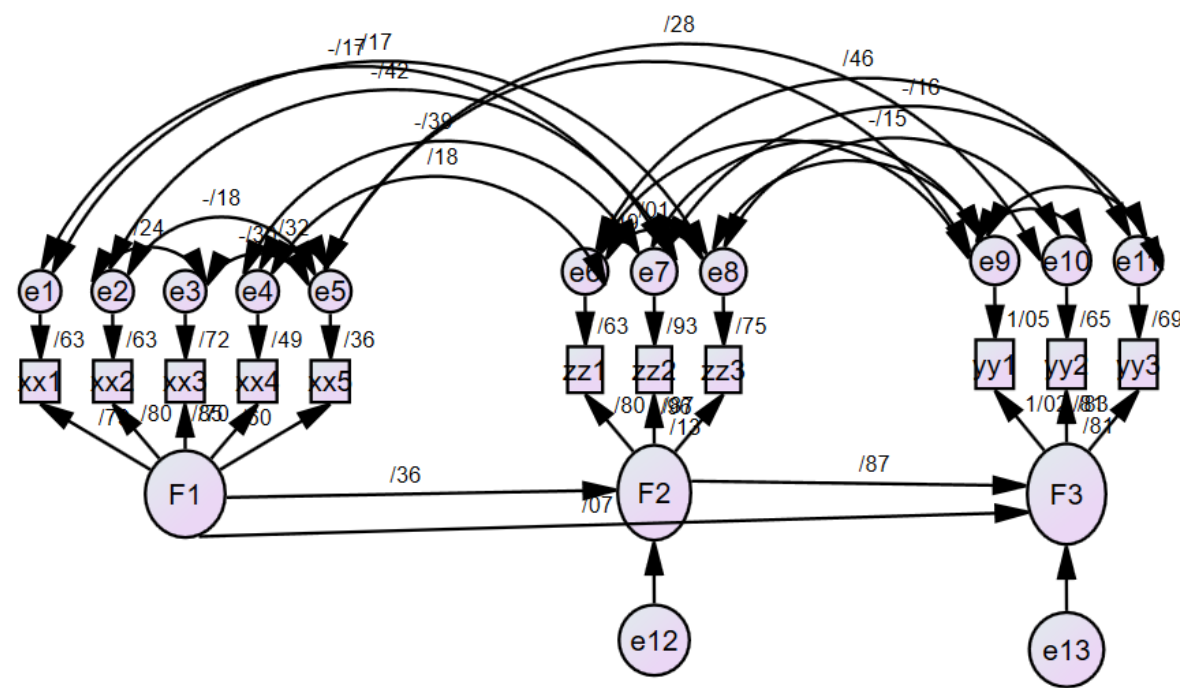


Figure 2- Standard model after modification

Fit indicators are used to check the suitability of the model. Kline (2023) RMSEA $\leq$ .05 values between 0.05 And 0.08 Acceptable fit RMSEA $\geq$ .10 Shows poor fit. CFI and GFI greater than 0.9 It may indicate a good fit of the researcher model and RMR values less than 0.10 they are usually

considered desirable. A chi-square ratio of freedom to less than 3 is considered desirable. Browne and Cudeck (1992) believe that values higher than 0.90 for IFI indicators, NNFI indicates good model fit.

Table 4. Model fit indices

Fit index	Cut-off point	Amount before correction	Status before correction	Amount after correction	Status after correction
X2	Non-significant	393.950	Undesirable	38.868	Undesirable
Df/x2	<3	9.609	Undesirable	1.943	Desirable
GFI	≥0.9	0.820	Undesirable	0.977	Desirable
CFI	≥0.9	0.852	Undesirable	0.992	Desirable
RFI	≥0.9	0.873	Undesirable	0.956	Desirable
NFI	≥0.9	0.838	Undesirable	0.984	Desirable
TLI	≥0.9	0.801	Undesirable	0.978	Desirable
RMR	≥0.10	4.526	Undesirable	3.013	Undesirable
RMSEA	≥0.10	0.170	Undesirable	0.056	Desirable

Table 4 shows the model fit indices. The modified model has a Chi-square model of 38.868 and a degree of freedom of 20, with a significance level of less than 0.05. Chi-square statistics are sensitive to the degree of freedom, so researchers have proposed other indicators to fit the model. The ratio of Chi-square to the degree of freedom is 1.943, which is in the desired range. The values of CFI, GFI, RFI, NFI, TLI indices are more than the cut-off point and are desirable. The RMR is 3.013, which is greater than the cut-off points of 0.1 is located at an undesirable level. The value of RMSEA index = 0.056 is also favorable and less than 0.1. In particular, the RMSEA and X2 / DF indices, which most researchers agree on, are in the desired range. It can be said that the model fit indices show that the model fits well with the data

Discussion & Conclusions

The aim of this study was to investigate the relationship between social skills and critical thinking with the mediating role of students' self-efficacy. The result of Pearson correlation coefficient showed that there is a

relationship between social skills and critical thinking. There is a relationship between self-efficacy and critical thinking and there is a relationship between self-efficacy and social skills. The structural equation model also had a good fit.

According to the background of internal research, social skills are directly related to critical thinking. And this finding is in line with the research of Jenaabadi and Mehdizade (2015) , Jenaabadi and Mehdizade (2015) , and Shahrakni Mousavi et al. (2019). Explaining this finding, it can be said that if critical thinking is not taught, it can not eliminate the lack of social skills of students who face many problems in adapting to the school and school environment and improve their social adjustment. In addition, the reduction of decision-making ability, problem-solving ability, and effective and constructive communication in interpersonal relationships lead to inappropriate and maladaptive behaviors and maladaptive social skills.



According to the background of internal research, self-efficacy is directly related to critical thinking. And this finding is consistent with the researches of Issanejad and Ghabadizade (2018), Hamidi et al. (2018), Jafaripanjani et al. (2018), and Orujlu and Hemmati Maslakkpak (2017). Explaining this finding, it can be said that self-efficacy leads to individual success through the organization of practice and behavior. As a result, high-level cognitive processes such as critical thinking and motivational factors such as self-efficacy lead to student success. In short, it can be said that critical thinking is the highest level of thinking that creates a new and positive attitude in the person towards himself, others and the world around him, and since self-efficacy also refers to a person's belief in abilities and has its own skills, it can be said that a high level of self-efficacy can lead to the development of critical thinking in the individual.

According to internal research records, self-efficacy is directly related to social skills. This finding is consistent with the researches of Hamidi et al. (2018), Khosravi and Jahangiri (2019), Shamsi and Amirianzadeh (2017), (Asghari, 2015), Abolghassemi et al. (2010). According to Fiori, Mcilvane, Brown, and Antonucci (2006), self-efficacy plays a mediating role in social skills, and constant interaction with social people leads to the belief that one has the ability to meet challenges. According to Bandura et al. (1994), self-efficacy is a multidimensional structure that includes three main areas that include academic, social and emotional self-efficacy. Social self-efficacy is an individual's

ability to deal with social challenges, a sense of ability in relationships with peers, and the ability to manage interpersonal incompatibilities (Muris, 2001). A strong sense of social self-efficacy creates positive relationships, while a lack of self-efficacy leads to withdrawal and alienation (Bandura et al., 1994). Through social self-efficacy, one is able to develop social skills to make life enjoyable and manage environmental pressures. In explaining this hypothesis, it can be said that a key assumption of social cognitive theory is that individuals tend to control the events that affect their lives and consider themselves as an effective factor. This sense of effectiveness is manifested in actions, cognitive processes, and emotional processes. Perceived self-efficacy is a central process that affects a person's effectiveness. At the heart of the concept of effectiveness and agency is self-regulation (self-regulatory learning), the process by which individuals activate, and continue their behaviors, cognitions, and emotions in an orderly and organized manner in order to achieve goals. Students with high self-efficacy, first, are confident in their abilities and do their homework with confidence. And the higher a person's score on self-efficacy, the higher his or her score on social skills.

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