

Analyzing Direct and Indirect Impacts of Emotional Intelligence on Employees' Self-Efficacy Using the SEM: A Case Study at the University of Isfahan

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ABSTRACT

Self-efficacy is an effective factor which is organized through cognitive, social, emotional and behavioral skills of human beings to realize various purposes. Given to the importance of self-efficacy and emotional intelligence the present survey has been conducted to study the impact of emotional intelligence on employees' self-efficacy at Isfahan University. Methodology of the survey is descriptive-analytical and based on structural equations modeling. Statistical population includes all employees of Isfahan University in 2011. Therefore, one-hundred seventy employees were selected using random-cluster sampling method. Tools of data collection are Goleman's emotional intelligence questionnaire and Sherer et al's self-efficacy questionnaire. Data analysis has been conducted using structural equations modeling method and SPSS and Amos software. It shows that emotional intelligence has a positive and significant impact on employees' self-efficacy at Isfahan University. Also five dimensions of self-awareness, self-regulation, self-motivation, sympathy and social skills have a positive and significant impact on employees' self-efficacy at Isfahan University. Results of factorial analysis reveal that the model has a suitable goodness. This survey illustrates emotional intelligence and its dimensions (self-awareness, self-regulation, self-motivation, sympathy and social skills) play an important role in employees' self-efficacy and influence of training emotional intelligence components and the information related to emotional intelligence at the workplace could have a considerable impact on improvement of employees' self-efficacy beliefs.

KEY WORDS: self-efficacy, emotional intelligence, self-awareness, social skills

1- INTRODUCTION

Self-efficacy is one of the most important factors to obtain success and competency and is placed in positive psychology scope (Snidder and Lopez, 2002). It refers to the individual's belief that he observes the ability to do a task in himself (Bandura, 1997). Whatever the individual's self-efficacy is higher he would believe in his ability to conduct the task more. Hence, individuals who have low self-efficacy would stop trying in difficult situations while those with high self-efficacy try to dominate challenges (Stajkovic and Luthans 1998, Bandura 2004). A strong sense of self-efficacy increases success, personal well-being and conflict management (Adeyemo, 2008). Moreover, it seems that individuals having high self-efficacy show more motivation and trying towards negative feedbacks while those with low self-efficacy try less (Bandura and Cervone, 1986). Self-efficacy is effective on choosing behavior, struggle, perseverance and following purposes and determines how to encounter with obstacles and challenges. According to Bandura's theory self-efficacy has an important role in psychological compatibility, psychological problems, physical health as well as strategies of changing self-guided behavior and counseling (Maddux, 2002). It is basically important in conducting stressful jobs like air traffic control and has an intervening and determinant role in the relationship among requirements of emotional jobs and temporal imbalance (Jex et al, 2002). It has been specified in several studies that intelligence and personality could enhance self-efficacy (Judge et al, 2007). Also researches demonstrate that emotional intelligence has a significant relationship with self-efficacy (Chan 2004, Animasahun 2008). Concept of emotional intelligence has been considered in many cases during recent years. Some believe that emotional intelligence is one of the success factors in educational and professional environments and social relations (Saatchi, 2004). Emotional intelligence means the individual's ability to control his emotions and feelings, sympathizing with other people and dealing appropriately in emotional relations (Harrison 1997, p 4). Carson et al (2003) show that emotional intelligence has a positive relationship with personal control and has a negative relationship with verbal violence. Ciarrochi et al (2001) believe some aspects of emotional intelligence immune people from disappointment and would be led to a better compatibility. Salovey and Mayer (1990, p 189) define emotional intelligence as the individual's ability to recognize his emotions and feelings and that of others to use such information to direct their thought and acts. Those who have a high performance enjoy higher levels of emotional intelligence and there is a strong link among their emotional capabilities and skills (Goleman, 1995). Indeed emotional inability causes individuals not to realize their potentials. Whatever an activity is more complex emotional intelligence would become more important (Smigla and Pastoria, 2000, p 60). Goleman has stated five dimensions for emotional intelligence in his two books about emotional intelligence (1995, 1998)

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which have been accepted by many researchers. These five dimensions are self-awareness, self-regulation, self-motivation, sympathy and social skills. Self-awareness means to have a deep understanding of one's emotions, feelings, strengths, weaknesses, needs and motivations. The second dimension of emotional intelligence is self-regulation that Goleman has called it emotions management too. Self-regulated individuals could resolve anxiety, sadness or distraction from themselves and deal with negative consequences or failures suitably. The third dimension of Goleman's emotional intelligence is self-motivation which means controlling emotions related to endeavor, enthusiasm and confidence in the individual and is led to obtain success. Self-motivation beside self-regulation causes the individual to remain hopeful in case of encountering with failure. The fourth dimension of emotional intelligence is sympathy which helps individuals determine changing of others' emotional states and feelings and show suitable reaction to them that would be resulted in more sensitivity and social self-confidence. The fifth dimension of Goleman's emotional intelligence is social skills. The ability to recognize others and sympathize with them, making effective relationship, deep listening and asking important questions, cooperation, coaching and talking are important elements of this skill. Three first elements of emotional intelligence, i.e. self-awareness, self-regulation and self-motivation refer the individual's management on himself. But sympathy deals with relationship manner of people with others although it is one of the elements of emotional intelligence (Goleman, 1995). Individuals who have rich efficiency resources (previous performance, observational learning, social encouragement and emotional excitement) have a higher sense of self-efficacy and are more successful in most aspects and show a more suitable behavior in difficult emotional interactions (Maddux, 2002). Believing in self-efficacy and emotional intelligence is not a totally fixed personality characteristic; rather it is changed during the time and by experience (Maddux 2002, Salovey and Mayer 2002). Rostami *et al* (2011) stated in their article that emotional and physiological states are effective on sense of self-efficacy in individuals and it is higher when they are calm comparing with when they are nervous and anxious. In contrast, those who don't believe in their capability experience less stress while facing with difficulties and maintain their emotional stability. Moira and Olivier (2008) examined the relationship among intelligence and cognitive assessment of stressful events and perceived high emotional intelligence has relation with self-efficacy, coping with stressful situations and assessment of stressful events as a challenge and opportunity for learning not a threat for security. Many researchers believe that there is a relationship among high emotional intelligence and better performance in self-regulation fields, self-assertion, independence, sympathy, optimism and self-efficacy (William *et al* 2008; Beverley *et al* 2008). Findings of Rastegar and Memarpour (2009) reveal there is a significant relationship between emotional intelligence and self-efficacy of teachers. Moafian and Ghanizade's studies (2009) demonstrate that three sub-scales of emotional intelligence (self-awareness, interpersonal relationships and problem solving) are good predictors for teachers' self-efficacy. Rathi and Rastogi's studies (2008) show that emotional intelligence has a positive relationship with self-efficacy and both variables have the capability to predict each other. According to these findings individuals with high emotional intelligence have a better performance in all situations than those with low emotional intelligence. Chan (2007) perceived in his study that students with high emotional intelligence have higher educational self-concept and self-efficacy and self-regulation is regarded as an important index and predictor for self-concept and self-regulation among four dimensions of emotional intelligence (optimism, emotional awareness, sympathy and self-regulation). Today researchers intend to determine and predict employees' successes through emotional intelligence theory (Gardner 2001, Bar-on and Parker 2000, Goleman and Boyatzis 2003). Therefore, emotions create a very important role in interpersonal situations and act as a major source of creating emotional and behavioral reactions against others (Latimer *et al*, 2007). For instance Elfenbein (2006) believes that accurate perception of individuals' emotions (type and intensity of emotions) facilitate prediction and perception of future performances. Given to the above findings about importance of emotional intelligence and self-efficacy and role of these variables on individuals' success the present survey has been conducted to provide evidences regarding the impact of emotional intelligence on employees' self-efficacy beliefs at Isfahan University.

METHODOLOGY

Objective of the present survey is to study and perceive impact degree of emotional intelligence on employees' self-efficacy at Isfahan University to determine which dimensions of emotional intelligence affect employees' self-efficacy and how much is the portion of each one in self-efficacy. This survey is applied in terms of purpose, descriptive-correlation in terms of data collection and is based on structural equations modeling. Structural equations model is a comprehensive statistical approach to test hypotheses about relations among observed variables and latent variables. It is possible to test acceptability of theoretical models in special populations and since most existing variables in psychological and managerial surveys are in latent form necessity of using such models becomes more increasingly (Segares, 1997). The present survey has been conducted on employees of Isfahan University in winter 2011.

Given to research literature in the previous section the illustrated model in figures (1) and (2) constructs the substructure of the present survey. Self-efficacy variable has ten self-efficacy questions that the obtained high scores show high self-efficacy. About emotional intelligence structure the intended dimensions are tested to study their relationship with self-efficacy.

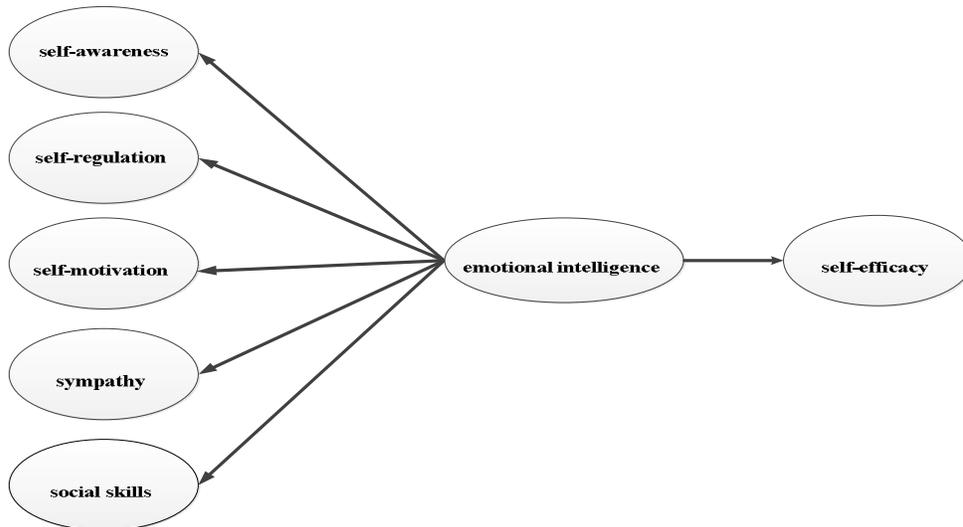


Figure 1- the primary represented model to measure the impact of emotional intelligence on self-efficacy

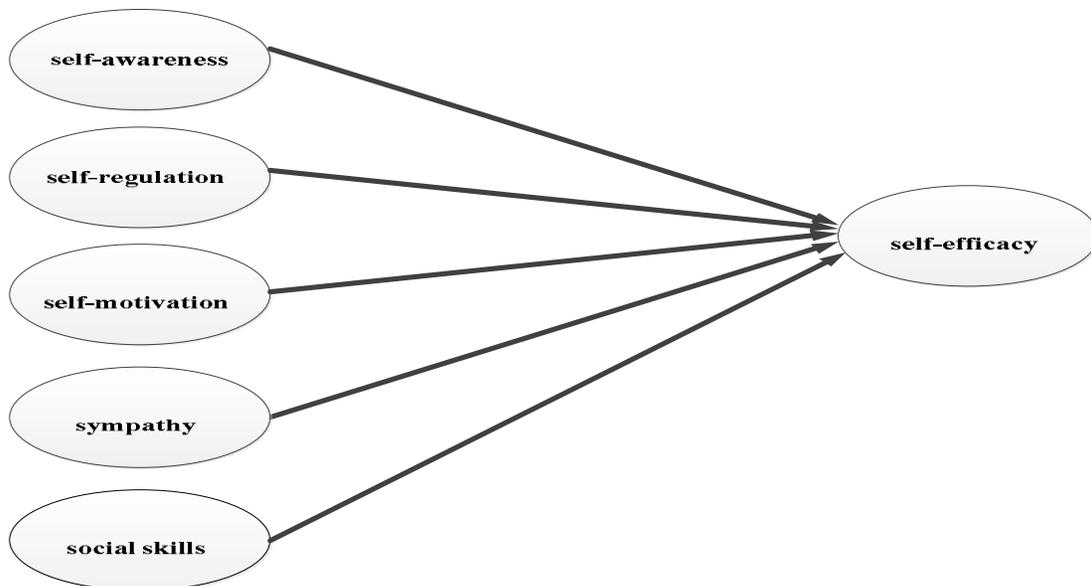


Figure 2- the secondary represented model to measure the impact of dimensions of emotional intelligence on self-efficacy

Given to above issues the following hypotheses have been represented to be studied and tested:

- H₁: emotional intelligence affects employees' self-efficacy (primary hypothesis).
- H₂: self-awareness affects employees' self-efficacy (secondary hypothesis).
- H₃: self-regulation affects employees' self-efficacy (secondary hypothesis).
- H₄: self-motivation affects employees' self-efficacy (secondary hypothesis).
- H₅: sympathy affects employees' self-efficacy (secondary hypothesis).
- H₆: social skills affect employees' self-efficacy (secondary hypothesis).

Statistical population of the survey includes employees of Isfahan University in 2011. One-hundred seventy (170) persons were considered as research sample using random-classified sampling method who had taken part voluntarily after representing a cooperation summons in Isfahan University and describing about the survey and that personal information of participants would be kept confidential in the framework of ethical codes of the survey.

Sherer et al's self-efficacy questionnaire (1982) and Goleman's emotional intelligence questionnaire (1995) were used to measure the represented variables in this survey. SPSS 18 and Amos 18 software were applied for data analysis. Hypotheses were analyzed by test and total goodness of the model was studied using structural equations modeling method. In structural equations modeling compatibility level of research data and conceptual model are studied to see whether it has suitable goodness or not from one side and significance of relations is tested from the other side. Suitable goodness indexes of the model include X^2/df , RMSEA, GFI, AGFI, NNFI (TLI), NFI, CFI and IFI. Given to these indexes a model has suitable goodness in which X^2 with regard to degree

of freedom (df) is less than 3; amount of RMSEA is less than 10%; amounts of GFI, AGFI, NNFI (TLI), NFI, CFI and IFI are more than 90% and amount of PNFI is more than 50%.

FINDINGS

Structural equations modeling method was used to study total goodness of the conceptual model. Testing hypotheses of both models was conducted using Amos software. The first model measures the impact of emotional intelligence on self-efficacy and the second model measures the impact of each dimension of emotional intelligence on self-efficacy.

First all measurement models must be analyzed separately in order to determine indexes are acceptable to what extent for these models. Thus five measurement models that are related to variables are tested separately. Total goodness indexes for measurement models have been illustrated in table (2).

Table 2- total goodness indexes of measurement models

Indices Name	χ^2/df	GFI	AGFI	NNFI	NFI	CFI	IFI	PNFI	RMSEA
self-efficacy	2.43	0.904	0.949	0.933	0.906	0.962	0.940	0.643	0.071
self-awareness	2.25	0.915	0.921	0.918	0.923	0.919	0.962	0.762	0.043
self-regulation	2.52	0.952	0.914	0.925	0.928	0.973	0.977	0.603	0.035
self-motivation	1.74	0.955	0.918	0.943	0.946	0.914	0.963	0.844	0.024
sympathy	2.33	0.910	0.975	0.938	0.966	0.907	0.926	0.772	0.003
social skills	2.19	0.904	0.933	0.972	0.911	0.928	0.901	0.665	0.052
Recommended Value	3>	>%.90	>%.90	>%.90	>%.90	>%.90	>%.90	>%.50	<10%

Given to results of the above table it could be concluded that measurement models have suitable goodness and in other words total indexes confirm this issue that data supports the model well.

After studying and confirming measurement models in the first step, path analysis is used in the second step to test hypotheses. Total goodness indexes of path analysis for primary and secondary conceptual models are represented in tables (3) and (4).

Table 3- total goodness indexes of the primary conceptual model of the survey

Indices Name	χ^2/df	GFI	AGFI	NNFI	NFI	CFI	IFI	PNFI	RMSEA
Final model1	2.71	0.903	0.952	0.971	0.946	0.917	0.971	0.630	0.052
Recommended value	3>	>%.90	>%.90	>%.90	>%.90	>%.90	>%.90	>%.50	<10%

Table 4- total goodness indexes of the secondary conceptual model of the survey

Indices Name	χ^2/df	GFI	AGFI	NNFI	NFI	CFI	IFI	PNFI	RMSEA
Final model2	1.55	0.974	0.946	0.966	0.978	0.907	0.913	0.666	0.048
Recommended value	3>	>%.90	>%.90	>%.90	>%.90	>%.90	>%.90	>%.50	<10%

Given to the above issues it could be concluded that total indexes reveal suitable goodness of the model by data. In other words we can say that the collected data supports the model well. Structural equations model of the primary and secondary conceptual models along with regression coefficients are represented in figures (3) and (4).

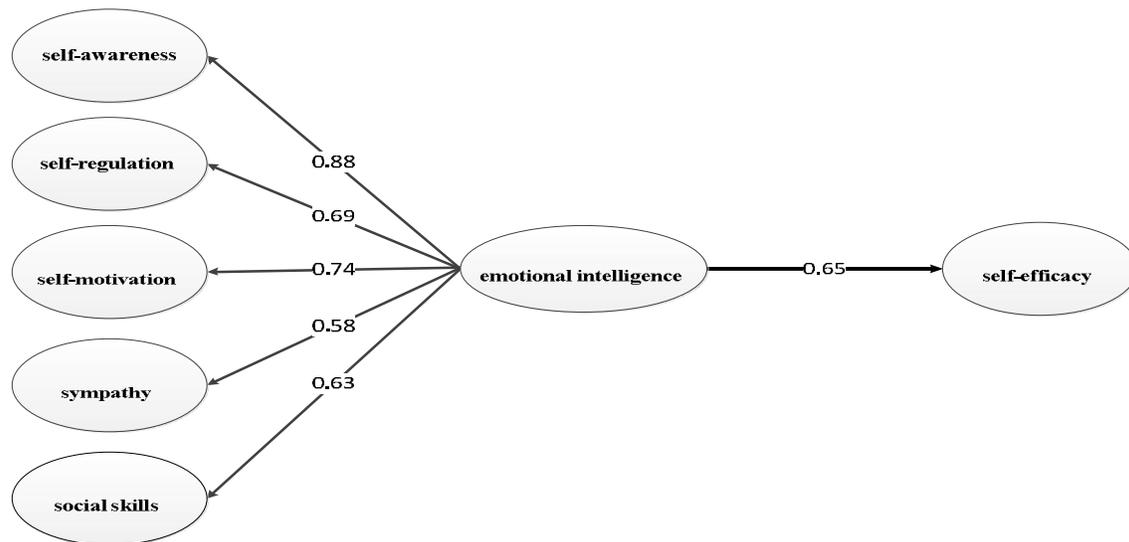


Figure 3- structural equations model of the primary conceptual model

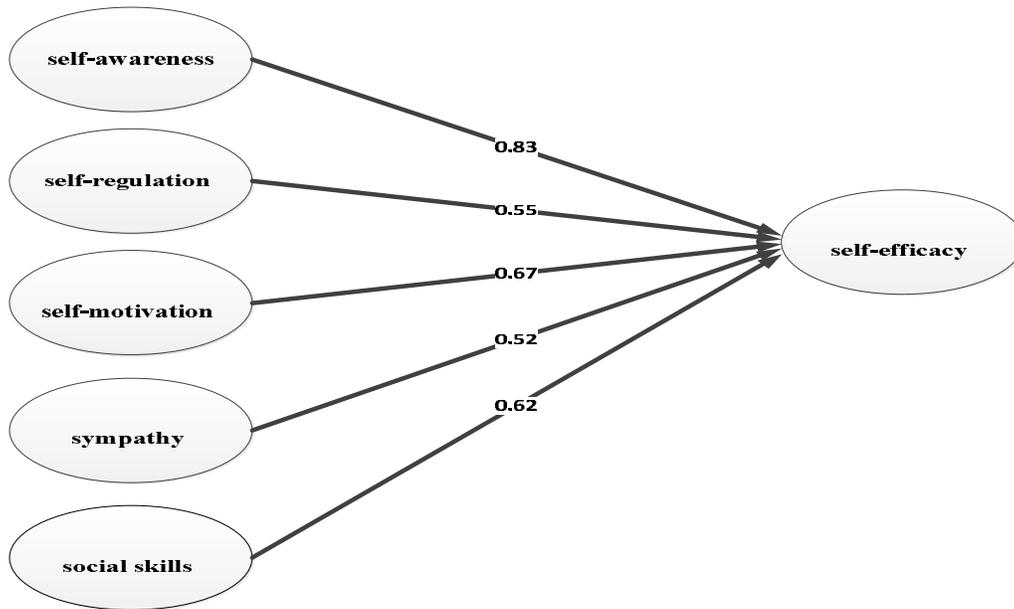


Figure 4- structural equations model of the secondary conceptual model

Two partial indexes of critical amount and P amount are used to test hypotheses' significance after studying and confirming the model. Critical amount is obtained through dividing "the estimated regression weight" by "the standard error" which must be more than 1.96 based on significance level 0.05 and if it is less than this amount, the related parameter is not important in the model. Also amounts less than 0.05 for P show significant difference of the calculated amount for regression weights equal to zero at confidence level 95%. Hypotheses, regression coefficients and amounts of partial indexes related to each hypothesis are represented in table (3).

Table 5- regression coefficients and results of hypotheses testing

Hypothesis	Variable	Path	Variable	Estimate	C.R.	P	Result
H1	Emotional intelligence	→	Self-Efficacy	0.65	6.74	*	Supported
H2	Self-awareness	→	Self-Efficacy	0.83	8.42	*	Supported
H3	Self-regulation	→	Self-Efficacy	0.55	5.36	*	Supported
H4	Self-motivation	→	Self-Efficacy	0.67	6.94	*	Supported
H5	Sympathy	→	Self-Efficacy	0.52	5.07	*	Supported
H6	Social skills	→	Self-Efficacy	0.62	6.14	*	Supported

Note: Significant at $p < .05$

Given to the obtained results in table (5) all hypotheses were confirmed with 95% confidence.

DISCUSSION

Self-efficacy theory that was proposed by Bandura in 1997 revealed that it wasn't a temporary concept. Researches of the two recent decades highlight importance of self-efficacy in individuals' success. Therefore, determining predicting factors of self-efficacy is so valuable. Objective of the present survey has been to study the impacts of emotional intelligence as predicting factors of employees' self-efficacy at Isfahan University. Results of hypotheses testing demonstrate that emotional intelligence and all its four dimensions have a significant impact on employees' self-efficacy. Standard coefficient of causal relationship between emotional intelligence and self-efficacy of employees is equal to 65% which shows emotional intelligence has a high capability to predict self-efficacy. This confirms results of previous theories and researches regarding effectiveness of emotional intelligence on self-efficacy (Moyra and Oliver 2008, Rastegar and Memarpour 2009, Moafian and Ghanizade 2009, Rathi and Rastuji 2008). Research evidences indicate failure in emotions management (increased anxiety and inefficient stress) is often the direct result of believing in low self-efficacy (Bandura 1997, Salovey and Mayer 2002). Those who have no confidence in their capabilities will get disappointed under risky conditions and the possibility to act effectively is decreased. Such individuals fear to encounter with challenging issues and thus their performance is damaged which would be led to more sense of inefficiency (Maddux, 1995). On the other side, high anxiety decreases performance and consequently sense of self-efficacy is reduced. Therefore, an individual who has a high emotional intelligence would control his feelings if necessary and deals with issues desirably. In explaining the relationship between emotional intelligence and self-efficacy it must be stated that individuals who can perceive and regulate their emotions and

that of others could create stronger social support networks and would have a higher sense of empowerment given that emotional intelligence includes a set of inter-related skills to perceive assessment and expression of emotions precisely, have access to emotions or create them for emotional and rational growth (Mayer and Salovey, 1997) and that self-efficacy beliefs affect manner of thinking, how to deal with emotional health problems, decision-making and confronting with stress and depression (Bandura and Locke, 2003). In contrast, those who have low emotional intelligence don't have the recognition ability and compatibility with others' emotions that are necessary for interpersonal relationships (Ciarrochi, 2001). Both constructs are a set of skills, talents and capabilities which enhance the individual's ability to be successful in confronting with environmental pressures and necessities. Accordingly, both variables have a positive relationship and could predict each other. Generally, it must be stated that emotional intelligence has an important role in fostering self-efficacy beliefs and positive self-concept among university employees and given that it is relatively fixed unlike intelligence quotient it is possible to enhance emotional intelligence through education. By growing emotional intelligence of university employees they obtain necessary interpersonal skills and are converted into knowledgeable employees and such positive changes enable them to be productive and efficient, enhance their skills, be satisfied with their function and obtain more successes. Therefore it is necessary to hold educational workshops for instructors and those involved in education to be trained and become familiar with the importance of such variables using appropriate strategies and models.

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