Social Intelligence in Education: A Mediator Analysis of Attitude[*]

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This article reports on a study of social intelligence in education. Authors surveyed approximately 1,188 students in the north of Vietnam to assess levels of social intelligence in education including awareness, attitude, and skills. Independent variables included region and the gender of students. Although there are no region and gender differences in social intelligence, correlations and mediating relationships are found.

Keywords: social intelligence in education, mediator, awareness, attitude and skills

Introduction

In recent years in Vietnam, a considerable amount of effort has been devoted to understanding the latent variables of social intelligence (Albrecht, 2006) in education. Despite the attention this topic has received, a large portion of the variance in social intelligence has yet to be explained. The present paper is an attempt to account for some of this unexplained variance including awareness, attitude, and skills. To most educators, the relationship between teaching and learning is always a causal relationship. The transmission of knowledge has always been a central aspect in education, but this function is changing rapidly due to the easy access to information and knowledge facilitated by new information and communication technologies. In addition to the transferring knowledge, educators need to transfer *attitudes*. The latter is concerned with social intelligences (Oberst, Gallifa, Farriols, & Vilaregut, 2009). To fulfil the demand of the work place of teamwork *skills*, many schools have implemented group-based learning in their classrooms. In most instances, such group work provides students with what is required as their final product, but not the teamwork skills necessary in order to be able to handle social intelligences involved (Peterson, 2012). Oberst et al. (2009) developed some general principles for educators to increase social competences among groups of students. They point out the importance of student's self-assessment; student's own *awareness* of strengths and weaknesses should be the starting point. Students then would be asked to commit to work and develop some of these competences. A final feedback and assessment together with the instructor help students to check if the desired results have

been achieved (Oberst et al., 2009).

Some researchers have tended to apply social intelligence models which have been borrowed from other areas of inquiry (e.g., social psychology, behavioral psychology, and cognitive psychology). Other researchers have focused on cognitive processing that occurs immediately prior to the act of teaching and learning. Yet many decisions are made repeatedly or frequently over time and thus involve continuous-as opposed to discrete-processing (Hogarth, 1981). Anyways, social intelligences need to be an integrated part of education. They need time and space in the curricula. Oberst et al. (2009) suggest working with a specific emotional intelligent model as a basis for designing the desired curricula that is not lecture-based; so the emphasis would not be on merely transmitting knowledge. The authors highlight the need for institutional commitment in terms of financial support, staff, equipment, and coordination in order to guarantee success (Oberst et al., 2009).

In this paper, we address the limitation in the literature, and examine the mediator role of attitude on the relationship between awareness and behavior in social intelligence of the Vietnamese students. The following hypotheses (Hs) are proposed in relation to the consequences of the main factors:

H1: The survey will show adequate factorial validity as a measure of social intelligence in education.

H2: The mean levels of awareness, attitude, and skills are different.

H3: The latent factors of social intelligence in education are correlated.

H4: The effect of awareness on skills is partially mediated by attitude.

Methods

The authors designed a questionnaire to be answered by students in the north of Vietnam. This questionnaire sought (a) demographic information about the respondent; (b) the students' social intelligence in education including awareness, attitude, and skills. The questionnaire contained 26 Likert-type 5 points scale questions. The authors pretested the original version on 200 students and removed, relocated, or revised questions that were too easy or difficult. Most students completed the questionnaire in about 30 minutes.

To best understand and interpret the data, a series of indexes was developed. These indexes grouped questions by type of knowledge or information. The questions were derived from topics covered in textbooks and real life. The questionnaire was administered in both city and suburban areas; 1,188students participated in the survey. The sample showed broad demographic variation. Among respondents, 52% were female and 48% were male. The data are analysed by using SPSS and AMOS version 23.

Results

Factor Analysis

Assume that identifying latent variables that account for the correlations among measured variables is the goal of the research. As researchers, authors decided to use the structural equation modelling analysis (Gefen, Straub, & Boudreau, 2000) in this research. Both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are used. The model tested was a relatively simple model with three latent factors (awareness, attitude, skills) and 26 measured variables. The H1 was accepted.

Correlations and descriptive statistics for the factors are presented in the table below (see Table 1).

Table 1

Means, Standard Deviations, and Correlations

Factors	Mean	SD	1	2
1. Awareness	3.34	0.63		
2. Attitude	3.25	0.67	0.35**	
3. Skills	3.12	0.80	0.11**	0.21**

Notes. ** Correlation is significant at the 0.01 level (2-tailed). $N = 1,188$.

As indicated in the Table 1, skills score is lower in comparison to other factors: awareness and attitude. In other words, awareness and attitude levels were significantly higher than skills levels. The mean level of awareness was 3.34; for attitude, 3.25; and for skills, 3.12. There are no region and gender differences in social intelligence of the Vietnamese students in this study.

As the correlations in Table 1 show, skills were positively correlated with each of the other factors. The correlations ranged from a low of 0.11 to a high of 0.35. The correlation between awareness and attitude was 0.35. This indicates that when the awareness quality was good, students tend to apply it to the reality, thus confirming H2 and H3.

Mediating Relationships

The important point for mediating relationship is that a third variable plays an important role in governing the relationship between two other variables. Baron and Kenny (Hayes, 2009) argued that for us to claim a mediating relationship, we need to first show that there is a significant relationship in the direct pathway between the independent variable (awareness) and the dependent variable (skills).

Direct Pathway

The regression coefficient for the direct pathway Awareness on Skills is 0.11. In this case, it is also correlation between awareness and skills.
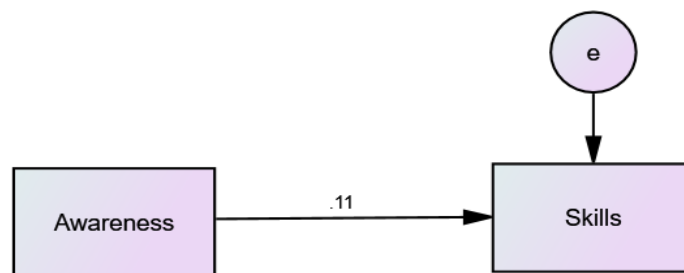

Figure 1. The relationship between awareness and skills.

Indirect Pathway

The next step is to show that there is a significant relationship between the independent variable and the mediator (attitude). Then we need to show that there is a significant relationship between the mediator and the dependent variable.

The regression coefficient for the direct path Awareness on Attitude is 0.35, whereas the regression coefficient for the direct path Attitude on Skills is 0.19. Then the regression coefficient for the indirect path

Awareness on Skills as product of single paths is: 0.35 x 0.19 = 0.07. If awareness changes by one standard deviation, then skills changes by 0.07 standard deviations via attitude. The total path as product of sum up direct path and indirect path is: 0.04 + 0.07 = 0.11.

These three conditions require that the three paths (involving awareness, attitude, and skills) are all individually significant. The final step consists of demonstrating that when the mediator and the independent variable are used simultaneously to predict the dependent variable, the previously significant path between the independent and dependent variables is now reduced (partially mediating relationship), if not nonsignificant. The H4 was accepted.
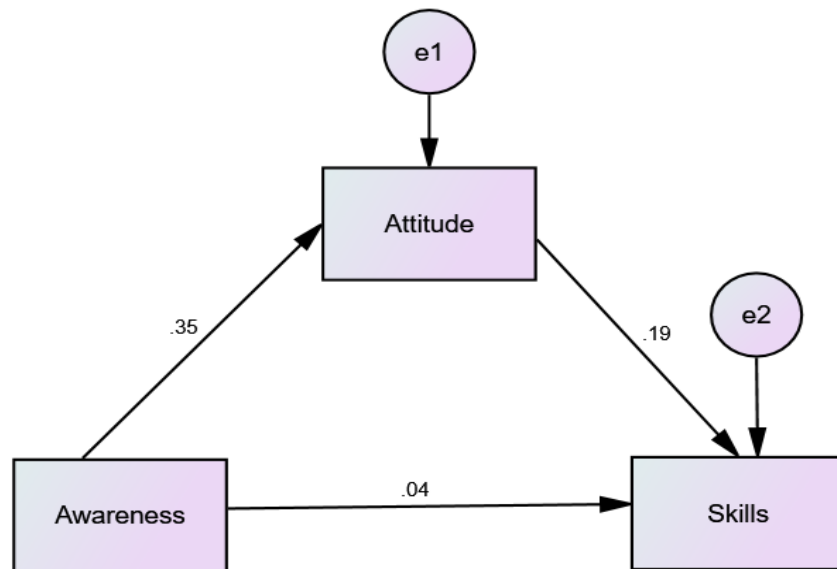

Figure 2. Mediating role of attitude in explaining the relation between awareness and skills.

Conclusion

This research indicates that levels of social intelligence in education including awareness, attitude, and skills are quite high. The skills are low among them, but their levels of awareness and attitude are higher. The latent factors are correlated. There are no region and gender differences in social intelligence in this study. The effect of awareness on skills is partially mediated by attitude.

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