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Constructing and Validating a Scale to Measure the Role of Factors Affecting EFL learners' Moral Competency

Somayeh Javadi Mehr
PhD student, Ferdowsi University of Mashhad, Iran

Azar Hosseini Fatemi *
Associate professor, Ferdowsi University of Mashhad, Iran

Behzad Ghonsouli
Associate professor, Ferdowsi University of Mashhad, Iran

Reza Pishghadam
Associate professor, Ferdowsi University of Mashhad, Iran

Abstract

The major purpose of this study was to design a new scale to measure the role of factors affecting the moral judgment competency of EFL learners (FAMC) and examine the construct validity as well as the criterion related validity of this newly designed test. Four hundred EFL students participated in this study. They firstly completed MJ test, developed and validated by Lind (1998). In the second phase of the study, those participants who obtained high and low C-scores in MJ test were invited for a semi-structure interview. Interviews revealed four main factors influencing MJ scores. Items of this scale were designed considering these four main factors and scrutinizing the relevant literature. Then, Exploratory Factor Analysis (EFA) was used to examine the construct validity of the FAMC test. The results have shown that the underlying factors of the test are what the test-designers claim to be. The results have revealed that four factors represent the underlying structure of this scale. To examine the criterion related validity of this newly designed instrument, correlation coefficient test was run between the findings of this scale and those of Moral Judgment test. Results revealed acceptable criterion related validity for this test. Finally, results were discussed, and implications were provided in the context of English language teaching.

Keywords: moral judgment competency, construct validity, EFL learners, criterion related validity, educational settings

* **Correspondence:** Azar Hosseini Fatemi, Email: hfatemi@um.ac.ir

INTRODUCTION

Moral judgment competency is defined as "the capacity to make decisions and judgments which are moral (based on internal principles) and to act in accordance with such judgments" (Kohlberg, 1964, p. 425; 1984, p.523). As moral judgment growth means analytic understanding, having value principles and the motivation necessary for citizens to live in a democratic society (Kohlberg, 1978, p. 43), it has received much attention from those concerned with human issues. Nowadays, many studies have been carried out to investigate the moral competency of people in medical, management and educational contexts.

For a long time, it was assumed that morality is inborn and installed in infancy, but now there is much convincing evidence that its growth continues to adolescence and even to adulthood (Lind, 2003). As such, growing interest has been shown to investigate the factors which could foster moral competency of people in different contexts.

Kohlberg (1964) asserted that taking social roles and guided reflection which are two critical ingredients of educational settings could increase one's level of moral competency. In his terms, educational settings play a critical role in improving people's moral decisions (Lind, 2000). It should be noted that in some situations; however, wrong education can lead to decrease in the morality level of students (Wakenhut, 1984; Räder and Wakenhut, 1984). Generally speaking, contexts in which participants are allowed to express their opinions freely and encouraged to focus on special topics and those which help them challenge other's opinions in non-competitive manners would develop cognitive aspects of moral judgment. On the other hand, emotionally supportive atmospheres contribute to the development of affective side of morality (Powers, 1988).

In the context of second language acquisition (SLA), one glaring gap that needs to be bridged seems to be between the educational moral aims and the opportunities created to achieve them. Many factors influencing students' morality are not known for both authorities and practitioners of the field .To the researchers' best knowledge, no study has yet been conducted to construct a scale to measure the cognitive and affective factors affecting moral judgment. Accordingly, the primary goal of the study is to construct and validate a scale to measure the role of factors affecting EFL students' moral competency.

LITERATURE REVIEW

Moral competency

It was at the twentieth century that some psychologists began to realize the crucial need for integrating affect and cognition in defining moral development. This movement led to the dual- aspect theory of morality and moral development (Lind, 2002). Kohlberg (1984) was the first one who defined morality as a competency and assumed all three affective, cognitive and behavioral aspects of moral judgment. Therefore, moral competency was defined as consisting two inseparable aspects: one of them is one's

affection to do certain moral deeds, another aspect is one's reasoning power and act according to his/her ideals and principles (Lind, 1985b; 2002). This new definition of the term steps away from earlier definitions which assumed it as being parallel with merely affective factors.

Factors affecting moral competency

For both Piaget and Kohlberge, the opportunities for active role taking and responsible decision making were very important for the development of moral judgment as they were necessary to create the required moral conflict that a person needs to solve (Lind, 2000b). Reiman (1999) defined role taking as a "complex new helping experience in a real world context such as teaching for the first time, mentoring, counseling, tutoring, collaborative inquiry or a community internship that is voluntarily assumed by a person. It precedes and shapes the intellectual consciousness (reflection) that grows out of it (p.603)".

Within the context of education, numerous researchers have found that role taking, guided reflection and taking social responsibility have impact on the development of moral competency of students (Lupu, 2009; Saeidi, 2011). Another closely related concept which is found to be affecting moral competency is democratic education (Newcomb, 1974; Gömleksiz, 1988; Doğanay, 2000). In other words, in a modern society, schools do not aim at training individuals to consume the available information, but to produce new information(Doganay,2000).Such education develops individual's ability to criticize and express their ideas freely. Kepanekçi (2006) classifies the factors which create democratic education as, firstly, establishing an atmosphere based on reciprocal communication away from competition and violence and in line with mutual respect and understanding. Secondly, students are provided with appropriate opportunities so that they can realize their democratic acquisition. There have been more than 2000 studies conducted showing the strong effect of teacher's democratic thoughts on the development of students' democratic attitudes (Güleç & BalçIk, 2009).

During this democratic educational process, teachers help students to acquire critical thinking skills which are assumed as the other factor affecting moral competency of individuals (Powers, 2006). Basic to the concept of critical thinking are the ability to challenge other ideas and find proper solutions when encountering a problem as well as the ability to focus on specific problems and analyze them from different aspects (Güleç & BalçIk, 2009).

All these factors help to promote the cognitive and affective domain of moral judgment, available measurement instruments, however, are basically constructed only around the effect of role taking and guided reflection on the growth of moral judgment.

Available tests to measure the factors affecting moral judgment

To assess the effect of role taking and guided reflection on the growth of moral judgment, Lind (1998, reviewed 2001) developed ORIGIN/u questionnaire. It is a scale to evaluate the role-taking and guided reflection opportunities within higher education

institutes. The test covers 8 domains for the two dimensions of role taking and guided reflection (each dimension contains 4 domains that include Syllabus related role taking opportunities(RTS), Semi-Syllabus related role taking (RTSS), Extra Syllabus related role taking opportunities(RTES), Non-Syllabus related role taking opportunities (RTNS); Syllabus related Guided Reflection(GRS), Semi Syllabus related Guided Reflection opportunities(GRSS), Extra Syllabus Guided Reflection opportunities(GRES), and Non-syllabus related Guided Reflection(GRN). This questionnaire is a descriptive quantitative measure that inquires students' practical experiences at the institutes where they are studying and does not intend to measure some personality trait or attitude.

The questions generally ask students the extent to which they have role taking or guided reflection opportunities in academic settings. In fact, this questionnaire evaluates the effect of two variables namely as role taking and guided reflection in four pre-specified contexts on the improvement of moral judgment and hence is not suitable to assess factors rather than these two dimensions and their 4 corresponding domains.

This study, considering the affective as well as cognitive interactions that help to develop moral competency, aims at constructing and validating a measurement instrument which can investigate the factors affecting moral competency in a variety of non-pre-specified (emergent) tasks and settings.

METHOD

Participants

A sample of 400 EFL learners participated in this study. They were all university students majoring in English Language and Literature of Ferdowsi university of Mashhad and Beheshti university of Tehran in the academic years of 2013-2014 and 2014-2015. From this number, 100 students were freshman, 100 sophomore, and 100 junior and 100 senior students. The age of participants ranged from 18 to 26 years. The overall mean age was 21.13.

Instrumentation

The participants of the current study were asked to complete MJ test of Lind (1998) and the newly-designed FAMC test.

FAMC (factors affecting moral competency) scale - it was constructed on a 5-point Likert scale from 1(never) to 5(almost always) and validated through factor analysis model and estimation of criterion related validity with validated and reliable moral judgment test (MJT) (Lind, 1998). Items of this questionnaire were developed based on the dual aspect model of Lind (2002) which defines moral competency in terms of two domains of affect and cognition. Scrutinizing the relevant literature, 3 factors of Focus, Sharing and Challenge influencing cognitive domain and Support as one major factor influencing affective domain were identified.

MJT(Moral Judgment Test) - it was developed by George Lind (1998) presents moral dilemmas to participants and offers them positive and negative arguments, giving reasons for certain types of behavior. According to Kohlberg, the arguments represent various levels of moral judgment. Using a scale of -4 to +4, participants indicate how much they endorse certain kinds of behavior and their ways of accounting for these behaviors. The standard version of the Moral Judgment Test contains two dilemma one of a health care worker and one of a doctor. Each dilemma first presents a problematic situation in the form of a story, followed by 12 arguments (six for and six against the behavior of the person involved).

Procedure

The researchers of the present study collected data at three phases. In phase one, participants were asked to fill MJT (Moral Judgment Test) to measure their c-score (moral consistency). In phase two, to investigate the factors affecting their moral competency score, the individuals with the highest and those with the lowest C-scores were invited to a semi-structured interview. To increase the validity of the qualitative part of this study, the researchers used a grounded theory. It helps the researchers to continue their data collection until the required association is created between the concepts (Dornyei, 2004). Following this theory, 60 EFL students who got high and low scores were selected and invited for the interview . Using the results of interviews and investigating the related literature, researcher developed FAMC scale (factors affecting the moral competency). Finally, in phase three, the respondents had to indicate their extent of agreement on the newly designed 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). The C-scores obtained from MJT were again used as a criterion to examine the criterion related validity of the newly designed FAMC scale. Before administering the aforementioned questionnaire, the participants were assured that their personal information would be kept confidential.

Data analysis

Firstly, MJT C-scores were calculated through a specific measurement procedure which was developed by Lind (1998). Interviews helped the researchers to delve into the factors likely to affect the moral competency and MJT C-score of the participants. Thereafter, Exploratory Factor Analysis model, SPSS software (version 16.) was employed to investigate the item loading of FAMC scale and to see whether the designed items can properly measure the pre-specified constructs. Then, Pearson Correlation, SPSS software (version16.) was utilized to measure the criterion related validity of the newly designed scale. Finally, the reliability of the questionnaire was assessed by utilizing Cronbach's Alpha, SPSS software (version16).

RESULTS

Reliability

Cronbach Alpha estimated the reliability of the whole items as 0.85. All of the 4 factors yielded moderate to high reliability estimates ranging from 0.68 to 0.87 (see Table 1).

Table1. Reliability of each factor

Factors	Cronbach's Alpha	N of Items
Factor 1	.871	4
Factor 2	.843	4
Factor 3	.712	6
Factor 4	.682	3
Total	.852	17

Results of the qualitative part

For analyzing the interviews, they were recorded and transcribed. The researchers investigated the interviews and found that factors affecting moral competency of EFL students follow certain patterns. The researchers classified these factors (table 2) and calculated the frequency number of each factor affecting moral judgment of students to extract the factors mostly affecting moral competency of the participants.

Factor affecting moral competency of EFL students - A qualitative analysis of the EFL students identified the following factors which could influence their moral competency.

Table 2. Factors affecting moral competency

Attention to communication
challenging
sharing ideas with others
need supportive atmosphere

The ability to challenge others and having tolerance to receive others' criticisms: As table 3 shows, interviews revealed that 37 out of 40 participants with higher MJt C-scores had more tendency to defend their ideas and criticize others ideas. These participants were also more willing to express their disagreements with others. These high score students could change their opinions if needed and could ask their interlocutors to change their ideas. However, participants with low MJt C-scores showed a reverse trend. Table 3 displays that only 5 participant with low MJt C-score had tendency to challenge others ideas. As an example, one of the students stated: "In situations which need rejecting others views by expressing my direct view, I have tension and I do not know how to express my idea non-aggressively ". Another student stated: "when I want to express my adverse view, I am unable to support it and I can't find proper justifications to convince others".

Paying conscious attention to communications: Students with lower Mjt C-scores were not focused on the communications around them. As table 3 shows, only 1 out of 20 participants with low Mjt C-scores could focus on patterns of exchange in conversations. They were absorbed with other thoughts rather than what others are expressing around them. Some of them stated that they were involved with their personal thoughts when their classmates were explaining their agreements or disagreements. These participants were not aware how much others check their interlocutors understandings in interactions. They did not care to have an appropriate close for their conversations.

Those students who got high MJt C-scores showed an adverse tendency. 36 out of 40 high MJt C-score students benefited from focus factor.

Sharing their ideas with others: Sharing ideas helps students have the chance to explain and clarify their ideas. The analysis of interviews showed that those who scored high in MJt C-scores used to find themselves responsible to provide pertinent answers and information when needed. 38 out of 40 high C-score students stated that they preferred to share their views with others. They preferred to combine previously stated ides and generate new ideas. They respect others ideas and expect others to respect their views as well. EFL students who got low MJt C-scores revealed an adverse trend. 5 out of 20 low C-score participants stated that have shared their opinions with others in different situations (Table 3).

The presence of emotionally supportive atmospheres: This factor endorses to affective realm .Those EFL students who scored high in MJt C-scores showed a tendency to praise others when they liked what others had said. They also stated that they had been appreciated by others in different situations when they had expressed their idea. They could use non-offensive sense of humor to express their ideas and attract others attention in conversations. As an example, one of participants stated "I use sense of humor when I think my idea disagrees with others". Another student said" I think using sense of humor would help me to express my adverse ideas without bothering others". Interviews showed that 39 of all high score students were influenced by this factor. This number was 3 for low score students (see Table 3). These 39 high MJt score students asserted that when they emotionally support or are supported by others in a conversation, they can better focus on the communication, are more willing to share their ideas, and more open to criticism and challenge others. However, interviews with 3 low score students who did not have the chance to emotionally support others or have not been emotionally supported in communications showed that they were not interested in focusing on conversations around them, were not willing to share their view with others, and found it quite difficult to challenge or be criticized by others.

Table3. Frequency number of participants affected by four extracted factors

	Number of interviewed participants	Focus	Sharing	challenge	Emotional support
High MJt C-score participants	40	36	38	37	39
Low MJt C-score participants	20	1	4	5	3

The information obtained from interviews made the researchers select these four high frequency factors as the factors likely to affect the MJt C-scores and design a scale including 25 items. 6 items were developed to measure the effect of emotional support on MJ. 5 items were generated to investigate the influence of focus on MJ.8 items were made to measure the impact of sharing view with others on the improvement of MJ. 6 items were made to examine the effect of challenge on MJ.

Construct validity

Table 4. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.953
Bartlett's Test of Sphericity	Approx. Chi-Square	1.138E4
	Df	136
	Sig.	.000

As table 2 shows, KMO test was used to ensure the sampling adequacy. As the results indicate, KMO is more than the significance level of 0.50. Therefore, the sampling adequacy is confirmed.

Another test taken was Bartlett which was conducted to examine whether the sample is spheric. The significance number for Bartlett test is 0.00 which approves the sphericity of the sample. The results obtained from the two tests revealed that the factor model was appropriate.

Table 5. Varimax Rotation with Kaiser Normalization Rotated Component Matrix

Components			
1	2	3	4
4=.82 1=.78 3=.70 6=.61	13=.81 8=.80 9=.78 11=.73	19=.88 12=.77 16=.61 2=.60 17=.50 10=49	22=.85 20=.78 24=.73

The construct validity of FAMC was examined through EFA. The model extracted 5 factors. The results obtained from Scree Test indicated that a 4-factor solution might provide a more suitable grouping of the items in the questionnaire.

The result of Varimax with Kaiser Normalization was a rotated component matrix. The results of this analysis are shown in Table 5. The results indicated that the first factor consisted of 4 items. The second factor consisted of 4 items. Factor 3 consisted of 6 items. Factor 4 consisted of 3 items .The total number of items was 25, out of which 8 items were excluded.

Criterion related validity

To measure the criterion related validity of FAMC, Pearson correlation test was used to assess the correlation between the newly designed FAMC test and MJT C-scores. Table 6 shows the descriptive statistics for participants' C-scores in four years of studying English language and Literature at university.

As table 6 indicates, students' C-score means increases from 20.43 in the first year to 23.68 in the second year of studying English Language and Literature, this number reaches 27.24 in the third year of their academic studies and finally 32.28 on their graduation. Table 5 shows that the total mean of MJT C-scores in the four-year period of

studying at university is 25.91 and the total mean of FAMC test scores in the same period is 46.74. As table 6 indicates, Pearson correlation was 0.91 which approves the high criterion related validity of FAMC scale. This high correlation coefficient between these two tests indicates that increase in FAMC scores results in higher C-scores and thus higher moral competency.

Table 6. MJT C-score reports

	N	Mean	Std. Deviation	Minimum	Maximum
year1	100	20.4381	12.12686	.96	50.05
year2	100	23.6810	13.27359	1.78	53.66
year3	100	27.2492	15.16271	2.00	61.00
year4	100	32.2830	17.30299	2.80	67.00
Total	400	25.9128	15.19583	.96	67.00

Table 7. Descriptive Statistics of C-scores and factors

	Mean	Std. Deviation	N
Mjt	25.9128	15.19583	400
Factors	46.7400	20.19684	400

Table 8.Correlations

		Mjt	Factors
Mjt	Pearson Correlation	1	.915**
	Sig. (2-tailed)		.000
	N	400	400

** Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

This study sought to construct and determine the construct validity, criterion related validity as well as the reliability of a newly designed scale measuring the factors affecting moral judgment competency of EFL students. The results of this analysis were used to name each factor. The definitions for each factor are provided below.

Focus is the label for the first factor which consists of 4 items. As it is shown in table 4, items 4, 1, 3 and 6 measure students' amount of focus to activities and tasks that they have participated in. Focus helps students to pay conscious attention to situations which demand them to communicate both differences and similarities of their perspective. If a discussion loses its focus, it becomes too diffuse or the nature of the task is not clear which would lead to foggy communication. Item 4 refers to participants' attention to agreements or disagreements between group members. Item 1 measures their attention to previously stated ideas. Item 3 measures the extent to which participants check others understanding of stated ideas. Item 6 measures the extent to which they pay attention to an appropriate close for a discussion. Items measuring focus factor (4, 1, 3, and 6) are numbered from 1 to 4 respectively in the final version of the scale.

The second factor is named challenging which accounts for students' criticisms against others reasoning and ideas and also their request to change others perspectives. This factor consists of 4 items. Items 13, 8, 9 and 11 refer to challenging category. All items related to challenge are in the competitive mode, but they are not overtly affectively conflictual. By challenge, they can also express simple disagreements. Item 13 measures participants' degree of defense or refinement of their own position against another's' criticism. Item 8 refers to their chance to critique another's reasoning. Item 9 refers to students' chance to request a change in another's reasoning or behavior. Item 11 refers to their chance to register simple disagreement with others. Items referring to challenge factor (13, 8, 9 and 11) are numbered from 5 to 8 respectively in the final version of the scale.

The third identified factor is sharing perspectives which is a non- competitive activity. It includes 6 factors. Items 19, 12, 16, 2, 17, and 10 were loaded in this category. Items loaded in this category refer to behaviors which are thought to be crucial for the clear expression of differences and synthesis of participants' positions, and thus, they aid constructive controversy. Some of these items also identify ways that participants may encourage the participation of others. This may be done by requesting others to share their opinion or by following up or elaborating another's stated viewpoint. These items also indicate when a person is trying to explore another's perspective. Item 19 measures students chance to state, elaborate or clarify their opinion. Item 12 refers to the degree to which they try to give pertinent information to a task. Item 16 deals with the degree to which they can justify their psychological processes to arrive at a solution to a dilemma. Item 2 measures their chance to share their ideas with others. Item 17 refers to the degree that they request others opinions. Item 10 measures participants' chance to integrate viewpoints to state a new idea. Items measuring sharing view factor (19, 12,16,2, 17 and 10) are numbered from 9 to 14 respectively in the final version of the scale.

The fourth factor which is stimulating to moral judgment of EFL students is from affective category. It consists of 3 items. All these items have non-transactive function. They deal with the amount of support which students receive when they are focusing on a discussion, sharing their opinions and challenging others' views. These non-transactive functions include praising measured by item 22, encouragement measured by item 20 and non-competitive humor which is measured by item 24.Items measuring support factor(22,20 and 24) are numbered from 15 to 17 respectively in the final version of the scale.

CONCLUSION

The purpose of this study was to construct and validate a scale to measure the role of factors which are stimulating the moral competency of EFL students. This study was the first attempt to develop a scale which could measure factors affecting the moral judgment of participants regardless of the specific task and context that they are involved with. As a consequence, it can be used to investigate the role of various

situations and tasks on the development of moral competency. The extracted four factors in this study were Focus, Challenge, Sharing view and Support.

Another instrument so far used to measure factors influencing moral judgment is ORIGIN/u developed by Lind (2002).It measures the role of only two factors of role-taking and guided reflection opportunities in four pre-specified contexts. The value of FAMC scale lies in aiding the researchers to employ it for different situations of their interest. Moreover, as researchers could use it to investigate the role of the factors of Focus, Challenge, Sharing view and Support in different contexts, they can compare the effect of various situations on each of the four factors and eventually on the development of moral judgment of participants. For example, researcher can use this scale to investigate the degree to which reading books, family, media, friends and other factors can affect moral competency of participants by affecting Focus, Challenge, Sharing perspective and Support domains defined in this scale.

Another significant aspect of this study is that it measures the factors stimulating moral competency in two categories of affect and cognition which is in line with dual aspect theory of moral judgment (Lind, 2002).

This study provides a new instrument to measure the factors affecting MJ of students. As growth of morality in educational contexts is a part of modern teacher education, it is of great importance for teachers to examine the effect of various tasks and activities on the development of MJ in their students. This scale helps them to fill the gap between teachers' conception of democratic education and the reality. The qualitative part of the study showed that both cognitive and affective elements affect the MJt of students. It revealed that students who were emotionally supported in conversations could more easily focus on conversations, share their ideas with others and criticize others. This pattern encourages teachers to pay more attention to affective side of their teaching and assume it as a facilitator which help other factors develop.

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APPENDIX

Factors Affecting the Moral Competency Test (FAMC)

Full name: Age: Gender: Degree:

Directions: *Read each of the items below and rate from 1 for Almost never to 5 for Almost always.*

NO	Item	Rate
1	I have had the chance to draw the attention of a participant or the group to agreements or disagreements between group members	
2	I have had the chance to paraphrase or sum up, and thereby focus, discussants' previously stated positions	
3	I have had the chance to check if others correctly understood my/their idea	
4	I have had the chance to attempt to bring the discussion to an appropriate close	
5	I have had the chance to state, elaborate upon, or clarify my/their own opinion	
6	I have had the chance to give information pertinent to the task	
7	I have had the chance to justify the psycho - logical process I went through to arrive at a solution to the dilemma	
8	I have had the chance to Share my own perspective with others.	
9	I have had the chance to request others' opinions or a clarification of another's reasoning	
10	I have had the chance to/ I have witnessed others having the chance to integrate two viewpoints to express a new idea.	
11	I have had the chance to defend or refine my own position against another's criticism	
12	I have had the chance to critique another's reasoning	
13	I have had the chance to request a change in another's reasoning or behavior	
14	I have had the chance to register simple disagreement with another	
15	I have had the chance to praise another person's reasoning or behavior	
16	I have had the chance to give a simple statement of encouragement or an indication that I am listening to another's statement	
17	I have had the chance to provide non-competitive humor.	