

© 2014, Science-Line Publication www.science-line.com

ISSN: 2322-4770

Journal of Educational and Management Studies

I. Educ. Manage. Stud.,4 (1):06-13, 2014



Presentation of a Model for Evaluation of Effective Factors on Developing of the Perceived Excellent Educational Ethics

Mohammad Amini¹, Farhad Shafipour Motlag² and Jahanbakhsh Rahmani³

- ¹ Department of Educational Sciences, Islamic Azad University, Meymeh Branch, Meymeh, Iran.
- ^{2.} Department of Educational Sciences, Islamic Azad University, Mahallat Branch, Mahallat, Iran.
- 3. Department of Educational Sciences, Islamic Azad University Khorasgan Branch, Khorasgan, Iran.
- * Corresponding author's Email: amini424@yahoo.com

ABSTRACT: The present study was intended to identify the relationship between triple factors (supervision, fair/equitable treatment, and critique/ feedback of students) on developing the perceived excellent educational ethics. For this purpose, a sample including 382 high school students were chosen by means of multi- stage randomized cluster sampling technique from high schools at Isfahan City (Iran). The measurement scales which have been utilized in this survey comprising five questionnaires as follows: 1) The standardized questionnaire of Student Supervision (consists of 15 questions), 2) The standardized questionnaire of Fair and Equitable Treatment with Students (comprising of 18 questions), 3) The standardized questionnaire of Critique of Student (including 21 questions), 4) The standardized questionnaire of Educational Satisfaction (consists of 12 questions), and 5) The standardized questionnaire of Developing the Perceived Excellent Educational Ethics (including 10 questions). Route analysis was used to test the relationship between triple factors with developing the perceived excellent educational ethics via educational satisfaction as a mediating variable. The results indicated that the suggested model had the appropriate goodness of fit rate and educational satisfaction act as mediating variable among triple effective factors by developing the perceived excellent educational ethics.

Keywords: Students Supervision, Critique of Students, Equitable/ Fair Treatment with Students, Developing the Perceived Excellent Educational Ethics

Received 12 Dec. 2013 Accepted 15 Feb. 2013 ORIGINAL ARTICLE

INTRODUCTION

The educational ethics is the guardian for individual cumulative prosperity rehabilitation of students in the high schools. Violence from ethical norms of education may endanger students' ability for learning lessons content or the motive to continue their study. Educational morality of teachers and mentors is one of the subjects that always effect on teaching, training-learning system. As a factor that affected on students' attitude and personality, educational ethics is subjected to consideration concerning to latent aspect of teaching (Ghoorchian, 2003). Thus, paying attention to teachers' educational ethics and its dimensions through teaching stream may improve the quality of teaching method and motive for learning in students. Starratt (1991) argues that triple aspects of educational ethics i.e. supervision, equity, and critique (feedback) are especially important in teaching-learning system. Supervisory aspect of ethics deals with human's relations, position, or value and notices human supreme needs. Equity perspective of ethics considers learners' participation in training and teaching process and their involvement in making the related decisions to their excellence. The critical dimension of ethics explores the state of teaching method and status quo as well as competencies and merits based on scientific rational and logical criteria and scales and present its deductions for convincing purpose. Regarding ethical supervision and monitoring human's self, many recommendations have been posited in Islam (Mohammadi, 2012). Supervision means avoidance from the behaviors that make human far from the God and endanger his/ her humanistic values and position. Ethical supervision causes the human to take step only for God's consent. Therefore, those teachers who pay attention to this ethical dimension more than ever, will make effort for the sake of God's satisfaction in line with learning the students and their learners and they make every effort to train them (Shirvani, 2006)

Research Background

The studies (Shafipour et al., 2012) have shown that teacher's attention to position of students and establishing the aptly human relations with them by him/ her leads to create favorable attitude toward the teacher by students and as a result the educational ethic that was perceived by students regarding their teacher will be improved. In his investigations about the primary impacts of teacher's treatment with the students, Cohn came to this result that the primary effects of teacher's treatment with students is retained stably up to the end of year and in this study he found that attitude of students toward the teacher forms

within the two or three first sessions of class and hereafter it rarely varies. Glaser maintains that it is impossible to form a successful identity regardless of flourishing affection and existence value (Behrangi, 2000). Concerning to fair and equitable treatment with students as one of the other dimensions of educational ethics, the studies done by Golparvar and Arizi (2008), Golparvar et al. (2010), Shafipour et al. (2011), and Shafipour et al. (2010) have indicated that paying attention to educational equity organizational justice might contribute to learning climate and it causes the students to be satisfied with the behavior that was treated with them. Results of investigation conducted by Golparvar (2010) reflected that there is a positive significant relationship among educational ethics and educational equity. There is no doubt that ethics and ethical values have noticeable share in orientation of students' behavior. As it mentioned, the presence of critical thinking is another aspect of educational ethics. All teachers and mentors should welcome the critiques during their teaching and develop critical thinking in their students and learners. The studies done by Yousefi and Hossein (2010) indicated that critical thinking is a positive activity and in fact critical evaluation from situations and conditions is not considered as a necessary process for growth and development of learners. Educational institutions are mainly tasked with providing the ground for growing the professional competence and merit in learners, who enter into

their institutions. Anyway, supervision of students, equitable treatment with students and paving attention to students' critique make students to be satisfied with teaching- learning environment and for this reason this may improve motive for education in them. Wang's survey (2003) showed that effective interaction with teachers resulted in learners' satisfaction. If this relationship is satisfactory for learners, they take favorable attitude toward the teacher and they believe in educational ethics of their teacher. With respect to the studies theories and investigations, the present study generally tends to answer to this question that to what extent may triple factors (students' supervision, equitable treatment with students, and considering students' critique) effect on developing the perceived excellent educational ethics by students?

The current study

According to what it mentioned so far, the present investigation is aimed at review the relations among variables of equitable treatment with students, supervision of students, educational satisfaction, critique of students, and developing the perceived excellent educational ethics by means of a causal model. Direct and indirect relations have been suggested between the above structures in the offered model. The suggested relations have been shown in the following model.

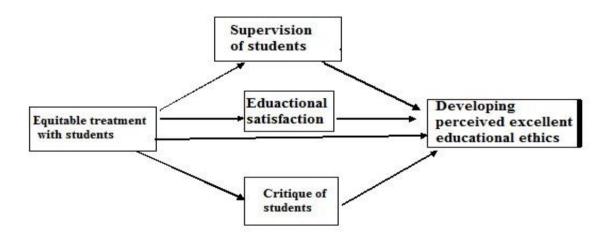


Fig 1. Conceptual model

MATERIALS AND METHODS

The method of the current research is non-experimental of correlation type. Statistical population of this study includes all high school students in Isfahan City (69944) at academic year 2012-13. To select the control group of study, with respect to Morgan's Table (1970) a sample with 382 respondents

were chosen by means of multi- stage randomized cluster sampling technique at first step and among all grades in high schools. Then, at next phase, three regions were selected randomly from six areas of educational system in Isfahan City and research questionnaires were randomly distributed among 382 participants in this study.

Table 1. Reliability coefficients for the used questionnaires in this study

Research questionnaires	Number of questions	Cronbach Alpha coefficient of reliability
Standardized questionnaire of students' supervision	15	0.91
Standardized questionnaire of students' critique	21	0.85
Standardized questionnaire of educational satisfaction	12	0.93
Standardized questionnaire of equitable treatment with students	18	0.89
Standardized questionnaire of developing perceived excellent educational ethics	10	0.95

RESULTS

Initially descriptive features of sample group (parameters of mean, standard deviation, minimum and maximum scores) are presented before purposing research findings.

As it observed in Table 2, distribution of scores for variable of educational satisfaction is skewed to positive side or in other words cubic sum of scores from mean value is a positive figure and scores of most of these respondents are higher than mean value. With respect to students' position from teacher's view as a variable, scores distribution has the maximum skewness and distribution of scores has the minimum skewness with respect to variable of educational satisfaction. Distribution of scores has positive kurtosis for all variable of research and this means scores of most of respondents is close to mean value at these scales. Distribution of scores has the maximum kurtosis for variable of educational

satisfaction while the minimum kurtosis of scores distribution belongs to variable of attention to students' critique regarding teaching implementation.

In order to predict developing the perceived excellent educational ethics, the suggested conceptual model was examined via route analysis method. To fit this model, technique of maximum likelihood method was used for approximation of model, and parameters of Chi- square (χ^2), parameter of Chi- square on

degree of freedom ($\frac{\chi^2}{df}$), Goodness of Fit Index (GFI),

Adjusted Goodness of Fit Index (AGFI), and Root Mean square Error of Approximation (RMSEA) were utilized for this purpose.

In table 3, correlation matrix for research variable is given. Pair-wise correlation among research variables could be observed in this matrix.

Table 2. Descriptive attributes of sampled group including parameters of mean, standard deviation, minimum and maximum scores

Variables	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
Developing perceived excellent educational ethics	1	5	2.4052	1.05912	-0.435	0.367
Educational satisfaction	1	5	2.4920	0.75962	0.045	0.969
Attention to students' position by teacher before teaching	1	5	2.4629	0.96927	-0.331	0.361
Attention to students' position by teacher during teaching	1	5	2.4767	0.97043	-0.425	0.670
Attention to students' position by teacher after teaching	1	5	2.4712	0.97977	-0.645	0.837
Distributive equity	1	5	2.6191	1.00892	-0.204	0.419
Procedural equity	1	5	2.5746	0.95828	-0.362	0.463
Interactional equity	1	5	2.5582	1.08212	-0.334	0.282
Attention to students' critique regarding teaching plan	1	5	2.4592	1.08812	-0.316	0.238
Attention to students' critique regarding teaching implementation	1	5	2.5432	1.15517	-0.447	0.018
Attention to students' critique regarding teaching evaluation	1	5	2.4314	1.08081	-0.335	0.131

Table 3. Correlation coefficients matrix of research variables

		2	3	4	5	6	7	8	9	10	11
1	Attention to ethics	0.12**	0.426**	0.410**	0.483**	0.190**	0.222**	0.262**	0.507**	0.451**	0.733**
2	Satisfaction	1	0.307**	0.314**	0.227**	0.552**	0.585**	0.537**	0.273**	0.278**	0.144**
3	Attention to teacher's position before teaching		1	0.807**	0.481**	0.317**	0.374**	0.506**	0.445*	0.429**	0.388**
4	Attention to teacher's position during teaching			1	0.582**	0.312**	0.376**	0.490**	0.491**	0.498**	0.436**
5	Attention to teacher's position after teaching				1	0.237**	0.308**	0.324**	0.774**	0.746**	0.554**
6	Distributive equity					1	0.723**	0.609**	0.274**	0.245**	0.161**
7	Procedural equity						1	0.723**	0.339*	0.280**	0.187**
8	Interactional equity							1	0.335	0.267	0.214
9	Critique of plan								1	0.797**	0.554**
10	Critique of implementation									1	0.589**

^{**} p<0.01

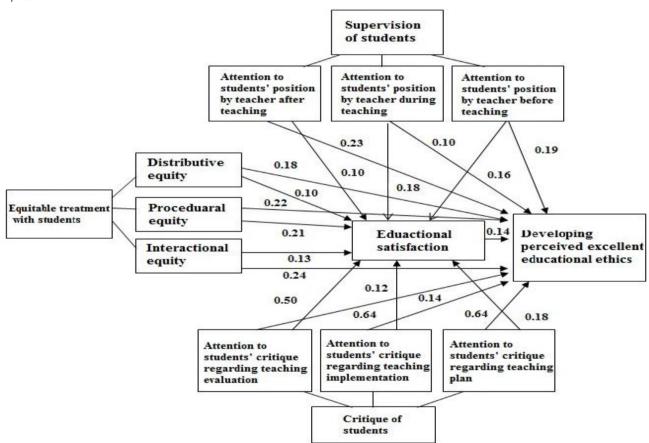


Fig. 2. Structured equation model after fitting of data with the assumed model

So, the direct effect for variables of paying attention to students' position by teacher before teaching (0.16), attention to students' position by teacher during teaching (0.18), attention to students' position by teacher after teaching (0.10), distributive equity (0.17), procedural equity (0.21), interactional equity (0.13), attention to students' critique regarding

teaching plan (0.34), attention to students' critique regarding teaching implementation (0.12)_, and paying attention to students' critique concerning to teaching evaluation (0.50) on educational satisfaction was significant.

Similarly, the direct impact for variables of educational satisfaction (0.14), paying attention to

students' position by teacher before teaching (0.19), attention to students' position by teacher during teaching (0.10), attention to students' position by teacher after teaching (0.23), distributive equity (0.18), procedural equity (0.22), interactional equity (0.24), attention to students' critique regarding teaching plan (0.18), attention to students' critique regarding teaching implementation (0.14), and paying attention to students' critique concerning to teaching evaluation (0.62) on educational satisfaction on developing the perceived excellent educational ethics has been significant.

Indirect effect of impact of attention to students' position by teacher before teaching (0.02), attention to students' position by teacher during teaching (0.02), attention to students' position by teacher after teaching (0.01), distributive equity (0.02), procedural equity (0.03), interactional equity (0.02), attention to students' critique regarding teaching plan (0.07), attention to students' critique regarding teaching implementation (0.01), and paying attention to students' critique concerning to teaching evaluation (0.05) on educational satisfaction on developing the perceived excellent educational ethics has also been significant.

The rate of interpreted variance in variable of developing the perceived excellent educational ethics by educational satisfaction, paying attention to students' position by teacher before teaching, attention to students' position by teacher during

teaching, attention to students' position by teacher after teaching, distributive equity, procedural equity, interactional equity, attention to students' critique regarding teaching plan, attention to students' critique concerning to teaching implementation, and paying attention to students' critique regarding evaluation of teaching was 0.34.

The rate interpreted variance of educational satisfaction by the variables of paying attention to students' position by teacher before teaching, attention to students' position by teacher during teaching, attention to students' position by teacher after teaching, distributive equity, procedural equity, interactional equity, attention to students' critique regarding teaching plan, attention to students' critique concerning to teaching implementation, and paying attention to students' critique regarding evaluation of teaching was 0.28.

These indices could not be deemed as the reason for fitness alone but they should be interpreted along each other. One can see the parameters of Chi-square

(χ^2), (1) parameter of Chi-2 to degree of freedom (χ^2

df), Goodness of Fit Index (2) (GFI), Adjusted Goodness of Fit Index (3) (AGFI), and (4) Root Mean Square Error of Approximation (RMSEA) to fit this model in the following table.

Table 4. Goodness Fit Indices of model

Chi-2	Degree of freedom (d.f)	Ratio Chi-2 to Degree of freedom ($\frac{\chi^2}{df}$)	Significance level	RMSEA	GFI	AGFI
142.65	24	5.94	0.05	0.062	0.92	0.90

Generally, there are several indices of fitness in order to evaluate the models so that here some of them have been used including chi- square parameter, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), and Root Mean Square Error of Approximation (AGFI). If sample size is 75-200, value of chi-2 is an appropriate index for fitness but chi-2 is almost statistically significant all the time for a model with greater n. Under such conditions, with respect to a series of reasoning, degree of freedom is purposed as a value based on which one can measure

magnitude of χ^2 . Although, this index lacks a fixed criterion for a reasonable model, sizes smaller than three (3) are usually considered as the appropriate index for goodness of fit.

Value of Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) range from zero to one so if this value is closer to one then goodness of fit is greater for the given value. But root Mean Square

Error of Approximation (RMSEA) should be the least value as possible while the values lower than 0.05 indicate the perfectly appropriate fitness and they show appropriate fitness up to 0.08 but 0.1 or greater values signify the lower fitness. As it shown in the above table, fitness indices for this model denote the appropriate fitness in this model.

DISCUSSION

Study results indicated that there is a positive significant relationship among variable of students' position by teacher before, during, and after teaching with developing the perceived educational ethics. Qaraati (2012) argues that teaching love may prepare the better platform for mentors in learning environment. Sergiovanni (1989) maintains that the governing ethical values on educational climate may cause teachers and students to work with higher motive and commitment and thus their performance to become beyond the usual work. Results of study

conducted by Shafipour Motlagh (2002) showed that the four factors (educational, motivational, cultural, and evaluation system) play important role in adjustment to ethical criteria of education and for this reason the practitioners of teaching and mentors should try to notice the adjusting their teaching behavior to the aforesaid factors. Studies done by Mohammadi (2012) has indicated that teaching is not only a learning process from teacher to student in divine religions, but knowledge possesses instinctive sanctity and honor to which one should be abided by humanitarian and ethical principles both at beginning stage of learning and in its application. Quoted from Moltafet and Khayer (2012) and according to views from Deci and Ryan (1985, 2000), the social and textural factors directly effect on individuals' rehabilitation. Teachers and there is one of the important environmental factors.

Way of interaction between teachers and students plays crucial role in educational and non- educational affairs among students. According to Rio, students' enthusiasm and dynamism in classroom depends on educational context that teacher build it. Educational achievement, satisfaction with school and other favorable outcomes in the schools are subjected to process of interaction between teachers and students to great extent. Results of research showed that variable of equitable treatment with students (distributive procedural eauity. eauity. interactional equity) had a positive and significant relationship with developing the perceived excellent educational ethics. Findings of studies done by Golparvar (2010) under title of "The relationship among ethics and educational equity with avoidance from scientific fraud" indicated that there is a positive significant relation among educational ethics and educational equity. But variable of educational ethics has negative significant relationship with educational injustice and fraud. Also the results came from the investigation conducted by Golparvar et al. (2012) under title of "The relationship among educational equity and injustice with civil- educational behaviors: the intermediate role of educational ethics, approach to ethical mediating events" showed that educational ethics serves as the perfect intermediate factor in relationship between educational equity commitment principles, to assistance, and participation (P< 0.01). Similarly, these results reflected that educational ethics is a perfect intermediate factor for relation among educational injustice with commitment to principles. The results of survey done by Golparvar and Arizi (2009) showed that only among the persons who believe in a lower equitable world, aggressive behavior of students against teachers might predict the negative emotion.

Also it indicated that aggressive interaction of students versus teachers and belief in an equitable world could not predict significantly the educational satisfaction and positive emotion. The studies done by Dezocave et al. showed that five classes of aggressive behavior will form against teachers unless unjust behavior is felt by students toward teachers: 1) Hazardous verbal behaviors like mucking and using inappropriate names and terms; 2) Dangerous physical behaviors such as battering; 3) Dangerous behaviors against personal devices and properties such as money robbery and harming of equipments such as automobile; 4) Social coercion or duress like compelling the teachers to give unreal scores; and 5) Manipulative behaviors by aiming at social isolation of teachers.

The results showed that variables of paying attention to students' critique regarding teaching evaluation, attention to students' critique about teaching plan, and paying attention to teaching implementation might play significant role in predication of share of developing the perceived excellent educational ethics. The findings from the survey done by Shaabani (2003) indicated that problem solving technique as a group activity might play valuable role in training of critical thinking skills. Also the study results acquired by Jahani (2007) showed that teaching of critical thinking becomes possible exclusively by research processes. With respect to this point, teachers and executives should train spirit of researching and growing mind potential in students. The study of Hashemian Nejad (2001) under title of "Presentation of theoretical framework regarding curriculum based on critical thinking in primary schools through focus on curriculum of social studies" indicated that six (eight?) skills are necessary for critical thinking: 1- asking question; 2- analyzing; 3evaluation; 4- subsumption; 5- reasoning; organizing. One of contemporary critical thinkers, Paulo Freire considers critical thinking as the goal of educational system and argues that it requires exchange of thoughts and ideas through dialogue in which both teacher and student are along each other in critical research and as a result they are stimulated by critical thinking about their life. This process finally leads to practice based on critical thinking that is considered as objective in technique of Freire. Formation of a learner complex with critical approach is based on this idea that learners should openly determine orientation and content of their learning by participation in decision making process (Reynolds, 1999). Chat Meyers, as author of critical thinking training book maintains that critical thinking means the power for regulation of generalities (ability to create an analytical framework), accepting new

possibilities (avoidance from prejudgment), and stopping judgment (healthy suspicion, prevention from hurried judgment). Quoted from Watson and Glaser (1980) deem this ability in six following skills: 1asking question; 2- analyzing; 3- evaluation; 4subsumption; 5- reasoning; 6- organizing. They believe that ability for critical thinking, processing, and evaluation of former information with the new data and the idea of critical thinking is a composition of knowledge, attitude, and performance in any person. They are the outcome and product of combining deductive and inductive reasoning with process of problem solving. According to Amirpour (2012), rather possessing a cognitive dimension, critical thinking has also some temperament elements and researchers in emotional field have often experienced importance regarding the relationship among emotional experience and cognitive processing in rehabilitation from positive emotions.

Many experts argue that happiness should be converted into fundamental objective for education. For example, Nenlo Dickens maintains that happiness and training are highly interrelated to each other.

Also these findings indicated that educational satisfaction may act as mediator variable in relationship among triple effective factors with developing the perceived excellent educational ethics. The studies done by Mir Kamali (2000) have shown that observance of equity in behavior (reinforcement and punishment), observing politeness and courtesy, way of speech regarding students cause heir educational satisfaction and for this reason, it improve educational motive in them.

Thus:

- **1.** There is a positive and significant relationship among paying attention to students' position by teacher before, during, and after teaching with developing perceived educational ethics.
- **2.** Educational ethics is the perfect intermediating factor in relationship of educational injustice with commitment to rules.
- **3.** Educational satisfaction act as mediator factor in relation among triple effective factors with developing perceived excellent educational ethics.
- **4.** Variables of paying attention to students' critique regarding evaluation of teaching, attention to students' critique about teaching plan and attention to teaching implementation have significant role in predication of developing perceived excellent educational ethics.

REFERENCES

Amirpour, B. (2012). "The relationship between critical thinking and its dimensions with rehabilitation

- and social self- esteem in students", quarterly of educational strategies, 5(3): 143-147.
- Behrangi, M. R. (2000). "Educational administration and training centers", Tehran: Golchin Pub.
- Deci, E. L. & Ryan, R. M. (1985). Intrinsic motivation and self-determination .
- Deci, E. L. & Ryan, R. M. (2000). Self-determination theory and the facilitation of intrinsic.
- Ghoorchian, N.(2003)."ICT in Educational System", Tehran: cognitive thought press.
- Golparvar, M. & Arizi, H.R.(2009). "The relationship among teachers' rehabilitation and belief in equitable world and students' aggressive behaviors against them", scientific- research quarterly of psychological health, career 3, vol.3 fall.
- Golparvar, M. & Javadi, S. (2006). "The communicative model between beliefs in equitable world and other with mental health parameter", journal of mental health, fall & winter, 8 (31-32): 109-122
- Golparvar, M. (2010). "The relationship among educational ethics and equity with avoidance from scientific fraud", quarterly of ethics in sciences & technology, 5th year, vols. 1&2, pp 57-66.
- Golparvar, M., Javadian, M., Esmaelian, Z. & Ardestani, Z. (2012). "The relationship between educational equity and injustice with civil- educational behaviors; a mediatory role of educational ethics (approach of mediating ethical events)", quarterly of modern educational thoughts, 8(3): 85-106.
- Golparvar, M; Arizi, H. R.(2008). "Comparison among beliefs in equitable world for oneself and others based on variables of gender, marital status, education, job, and housing state", Research journal of training, fall 2008; (4(16): 129-157.
- Hashemian Nejad, F. (2001). "Training of critical thinking through primary school curriculum: a conference on curricula and training of thought", Tehran: Publication of parents and teachers association, pp 183-251.
- Jahani, J. (2007). "The review on the impacts of P4 children in growing ethical characteristic of students", quarterly of curricula planning studies, year 2, vol.7, winter, pp 37-59.
- Maynard, H. & Joseph, S. (2000). Development of the multidimensional peer-victimization scale.
- Mir Kamali, S.M. (2000). "Humanistic relations in training center", Yastoroon Pub, summer.
- Mohammadi, M. (2012)."The impact of religion on educational ethics in the contemporary time", Tehran University.
- Moltafet, Gh., Khayer, M. (2012). "The relationship among students' perception of teachers' behavior style with psychological rehabilitation in them", journal of behavioral sciences, career 6, vol. 3, fall.

- Qaraati, M. (2012). "Educational ethics", Cultural center for TV program of Lessons from Quran, 1st Ed. Winter.
- Reynolds, M. (1999). "Critical reflection and Management Education rehabilitation less hierarchical approaches", journal of management Education, 23 (5): 537-553.
- Sergiovanni, T.J. & Moore, J.H.(1989). "Schooling for tomorrow: Directing reforms to issues that counts". Needham Heights, Massachusetts: Allyn & Bacon.
- Shaabani, H. (2003), "Teaching methods and techniques", Tehran: SAMT Pub.
- Shafipour ,M. (2002). "The ways of adapting educational principals' behavior to Islamic ethical criteria based on viewpoint from teachers of seminary and university in human sciences", scientific- researching quarterly of psychology of human sciences (seminary and university), fall 2002- vol. 32 (page 18 from pp 69-86).
- Shafipour, F. & Torabinahad, M. (2002). "Presentation of a model for evaluation of the relationship among occupational attachment, job success seeking and wholeness seeking with developing perceived educational ethics based of mediation of job motivation (Case study: students in Islamic Azad Universities at region no 5 of country)", under publication, quarterly of ethics & technology.
- Shafipour, F. & Yarmohammdian, M. (2011). "Presentation of model for evaluation of effective factors on curricula responsible and perceived in smart schools", scientific- researching quarterly in curriculum planning, Islamic Azad University (IAU) Khoorasgan branch, year 8, career 2, vols. 1 & 2 (serials 28-29), spring & summer.
- Shirvani, A. (2006). "The conduct plan in mystic wayfarers' epistles", Qom, Dar-Al-Fekr Pub, 2nd Ed. P 334.
- Starratt, R.J.(1991). "Building an ethical school: a theory for Practice in leadership", Educational Administration Quarterly, Vol. 27,No.2.
- Wang, Y. (2003). "Assessment of learner satisfaction with asynchronous electronic learning systems". Information & Management 41: 75–86
- Watson, G.B. & Glaser, E.M. (1980). "WGCTA Watson-Glaser Critical Thinking Appraisal Manual: Forms A and B". San Antonio: The Psychological Corporation.
- Yousefi, R. & Hossein, A. (2010). "Developing the critical thinking: a step toward transformation in medical education", 1st State Conference on Critical Thinking & Healthcare System, March.