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Original Article

Effectiveness of the School Management Ethics Program Using the Rate of Return on Investment (ROI) Model

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Abstract

Introduction: Ethics of education is one of the most important factors in educating the next generation. The purpose of this study was to investigate the impact of the school management ethics program using the rate of return model to improve education plans and programs.

Material & Methods: The research method was applied in terms of purpose and heuristic in terms of data type. In the qualitative part of the research, the foundation data method was used. There was a community of experts who purposefully selected the sample of 14 people with the principle of theoretical saturation. Data were collected through semi-structured interviews. Finally, the data were analyzed using coding method. In the quantitative descriptive-survey section, the population included school principals who were selected using cluster random sampling of 320 people. The instruments were three questionnaires: reaction, learning and job performance. One-group t-test was used to analyze the quantitative data and the ROI formula was used to calculate the return on investment.

Results: The ethical model of school management excellence was presented in the form of causal conditions, contextual conditions, intervening factors, central phenomena, strategies and consequences. The results of the quantitative section showed that the training courses of the ethical program of management excellence in the factors of reaction, learning, behavior, results and return on investment have had the necessary effectiveness and profitability.

Conclusion: According to the findings, in order to achieve an important goal such as return on investment, the education sector should be considered and ethical components should be given special attention in school management.

Keywords: *Management ethics excellence program, School principals, Rate of return on investment*

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INTRODUCTION

Improving human resources and moral excellence in educational organizations as a sustainable development infrastructure has long been of great sensitivity and importance. Educational administrators deal with the issue of ethics in different ways. Managers' decisions in various areas such as division of labor and organization, teaching, use of technology, grades, judging the behavior of individuals, encouragement and punishment, etc. have an undeniable effect on current and future behavior of students. Therefore, decisions in the field of educational management require consideration of broad ethical considerations that, if not observed, can lead to human catastrophes in the individual and social dimensions (1).

Today, most developed countries spend a significant portion of their gross national income on training and improving educational management for survival, growth and continuity of development, and the moral

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excellence of educational management is one of the important goals of educational development (2). Our country's education organization is one of the educational organizations that has done a lot of activities in this field so far. In this regard, it seems that this organization is on the eve of a fundamental change and on the horizon of 2025 in order to improve and scientific and moral excellence of its human resources, is making new investments. Since education is required to implement upstream laws and documents and to achieve the goals of the Fundamental Transformation Document, one of its implications is the formulation and implementation of an action plan. On the other hand, studies show that the plans and programs of this important and extensive organization in the field of calculating the return on investment, so far no serious studies have been conducted to evaluate and evaluate their financial effectiveness. Research also shows that educational organizations spend large sums of money annually to train and implement plans and programs in order to train and improve their human resources; without properly measuring their effectiveness (3).

Most experts believe that if there is to be a change in the field of education, this change must begin with the management of education (4). Because in a comprehensive definition, the management of the process of effective realization of the goals of the organization is accompanied by and through individuals (5). Most of the reasons for the success or failure of educational organizations in the field of human resources depend on the type of management, therefore, in a highly competitive world, it is human resources and the ability of the manager in human resources that determine the superiority of one organization over another (6). One of the most important factors in human resource management, especially in the field of education, is ethics, and the moral excellence of school management is of particular importance. According to some researchers, the heavy duty of school principals is to create an environment in which education is conducted in an ethical manner. In this way, whenever a principal accepts that the educational environment has a special value, he / she considers ethical standards desirable and considers it a great mission for himself (7). It has a lot. So far, several models have been developed to evaluate the effectiveness of training programs and courses. Particularly in the field of human resource education and improvement, the two major models, namely the four-level model of Kirk Patrick (1959) and the five-level model of Phillips (2009), have received more attention and application (8). Of these two models, the ROI or Phillips model, which complements each other, is one of the most attractive models in the management and planning departments of organizational education, which is considered as a warning to educators. To organize training and related processes more effectively and to create the necessary review in the content and educational processes. Calculating ROI and its findings can help education designers and developers to improve the efficiency, justify the effectiveness of training courses. For many researchers, measuring ROI in training and training management is a mechanism for making decisions in departments. Development is based on accurate data (9). Among the reasons for paying attention to calculating the rate of return on investment, identifying investment items in education, paying attention to customers, training in the concept of transferring learning, paying attention to the need to report to managers, determining the location of training in the set of production elements , The development of innovative and bold methods in line with the process of creating needs, educational methods and receiving development and training budgets (10). Accordingly, an educational program and activity can justify its value only when it provides reliable and credible evidence of the impact of education on improving participants' behavior and performance and organizational interests (11). Experts believe that one of the effective factors in increasing the rate of return on investment is the improvement of organizational policies, organizational resources and organizational culture (12, 13) and addressing the views of stakeholders in calculating the rate of return on investment is very important (12). Due to this and the importance of presenting a codified model in the field of ethics of school management ethics, the present study decided to use the ROI model to examine the effectiveness of the ethics model of school management ethics.

MATERIAL AND METHODS

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The research method was applied in terms of purpose and heuristic in terms of data type.

In the qualitative part of the research, the foundation data method was used. There was a community of experts who purposefully selected the sample of 14 people with the principle of theoretical saturation. Data were collected through semi-structured interviews. Finally, the data were analyzed using coding method.

In the quantitative descriptive-survey section, the population included school principals who were selected using cluster random sampling of 320 people. The instruments were three questionnaires: reaction, learning and job performance.

Reaction Assessment Questionnaire: To assess the reaction or satisfaction of the managers participating in the research (first level), the satisfaction level assessment questionnaire (14) was used. This questionnaire with 22 items on a five-point Likert scale evaluates the content of the training. . The validity of the reaction assessment questionnaire was confirmed by several experts and professors. In order to determine the reliability, this questionnaire was administered to 40 high school principals and its Cronbach's alpha coefficient was estimated to be 0.865.

The Learning Test Questionnaire, in which the transcript of the final test of the participants was 0.84.

Job Performance Questionnaire which assessed job performance in 8 axes and its validity was confirmed by experts and its reliability was estimated based on Cronbach's alpha coefficient of 0.81.

One-group t-test was used to analyze the quantitative data and the ROI formula was used to calculate the return on investment.

RESULTS

Qualitative part

In the present study, first, the ethical model of school management excellence was developed using the data method of the foundation. To do this, the collected data were categorized based on common themes to form the main concepts. Also, to validate the findings, the results were modified in several steps using member review strategies. For this purpose, in order to ensure the validity of the qualitative part of the research and in order to ensure the accuracy of the findings from the researcher's point of view, the opinions of professors familiar with this field and university experts who were experts in this field were used to confirm its acceptability. To be placed. To calculate the reliability, the researcher with the help of the consultant coder used the reliability method between the two coders. It is suitable for reliability. Also, in this study, review by experts was used. In this way, the findings were analyzed and the conclusions were made available to professors of technology and other researchers who were familiar with both the educational environment and the purpose of the research and the qualitative research, and the work process was approved. In this study, open coding was stopped when a meaningful classification was first obtained after reviewing the manuscripts several times, when subcategories and features were duplicated, or when relevant and new data were found from interview transcripts.

According to the analysis and coding of the interviews, 230 open codes, 43 secondary codes and 15 sub-categories of the data analysis process were obtained, which are shown in Table 1 of the open and pivotal codes related to each category.

Table 1: Results of categories and secondary open codes

Category	Secondary open codes
Belief in the need to promote ethics in school management	Ethical transcendence in management, the need for continuous improvement, the promotion of educational ethics

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Emphasize the role of rules and regulations	Rule of law, avoidance of conflicts of taste and order, correct selection of managers based solely on competencies
Community issues	Foresight, standardization of education, prevention of injuries, helping to grow legalism in students
Use of new technologies	Continuous training of managers in the use of hardware and software, design and production of educational and scientific content
Pay attention to opportunities and threats	Use efficient human resources, create opportunities to acquire new skills, decentralize and empower managers
Participation of managers	Forming a specialized committee to improve managers (with the participation of managers), assess needs and determine ethical priorities, strengthen participation in work
Maturity and improvement of individual ethics in managers	Strengthen the characteristics of growing management, encourage creative and innovative managers, support and increase the motivation of competent and ethical managers
Organizational Culture	The need for organizational harmony, cooperation and exchange of experience in school
Realization of vision 2025	Belief in human resource development, transformation, improving the school's relationship with family and community, promoting health, turning the school into a learning organization, productivity and return on investment
Establishment of improvement centers	Designing improvement centers in education departments, promoting a culture of improvement, training and developing the initiative and creativity of managers
Organizational support and support	Creating motivational mechanisms, providing effective facilities, providing opportunities for promotion of managers
Development	Professional and scientific competence of managers, positive attitude towards the use of educational technologies
Professional improvement of managers	Strengthen stakeholder participation in school management, design and implement a strategic plan with the participation of the school council, transform the school into a learning organization, promote professional ethics, constructive interaction with staff, economic management
How to run programs	Serious efforts in implementing the rules and regulations, proper use of existing capacities, attracting active participation in school executive programs
Implement the school management ethics program	Quality orientation, creating opportunities for participation of all school stakeholders, creating organizational harmony, striving to implement a program of moral excellence in school

Since the information analysis process in foundation data theorizing is based on three stages of open coding (creation of concepts and categories), axial coding (identification of central categories, causal conditions, interfering factors, contexts, strategies and consequences) and selective coding (develop a research model). In this study, based on the content analysis and exploratory inference of interviews with experts, in Table 2, the categories related to causal conditions, central phenomena, underlying conditions, intervening factors, strategies and related outcomes are presented.

Table2: Axial coding

Categories	Secondary open codes

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Casual conditions	Qualityism	Ethical transcendence in management, the need for continuous improvement, the promotion of educational ethics
	Terms and Conditions	Rule of law, avoidance of conflicts of taste and order, correct selection of managers based solely on competencies
	The needs of the community	Foresight, standardization of education, prevention of injuries, helping to grow legalism in students
Axial conditions	Moral excellence and human resource improvement	Forming a specialized committee to improve principals, assess needs and determine priorities for scientific and ethical improvement of school principals
Background conditions	Organizational culture	The need for organizational harmony, cooperation and exchange of experience in school, transformation
	Support	Creating motivational mechanisms, providing effective facilities, providing opportunities for promotion of managers
	New technologies	Continuous training of managers in the use of hardware and software, design and production of educational and scientific content
Intervention conditions	Terms and conditions	Use of efficient human resources, creation of opportunities to acquire new skills, decentralization
	Axial development	Emphasis on the professional and scientific competence of managers, a positive attitude towards the use of educational technologies
Strategies	Establishment of improvement centers	Designing improvement centers in the departments of education, specialized training, developing and encouraging the initiative and creativity of managers
	Execution methods	Serious efforts in implementing the rules and regulations, proper use of existing capacities, attracting active participation in school executive programs
	Implementation of the program of moral excellence	Quality orientation, creating opportunities for participation of all school stakeholders, creating organizational harmony, striving to implement a program of moral excellence in school
Consequences	Improving individual ethics	Strengthen the characteristics of high management, encourage creative and innovative managers, support and increase the motivation of competent and ethical managers
	Professional improvement	Strengthen stakeholder participation in school management, design and implement a strategic plan with the participation of the school council, follow the rules, transform the school into a learning organization, promote professional ethics, constructive interaction with staff, economic management
	Realization of vision 2025	Belief in human resource development, transformation, improving the school's relationship with family and community, promoting health, turning the school into a learning organization, return on investment

In this study, after extracting the concepts of primary and secondary open codes in the form of subcategories and converting them into main categories, then using the axial coding process of the categories obtained in the form of a paradigm model with a systematic approach of data theory Which is based on identifying the mentioned categories in the form of causal conditions, contextual conditions, intervening factors, central phenomena, strategies and consequences (15)

Quantitative part

After compiling the model of moral excellence of school principals, a periodical based on the model was developed and implemented. In order to evaluate the effectiveness of this course, descriptive statistics and inferential statistics were used. In the statistics section, descriptive tables of

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frequency distribution, mean, standard deviation and graphs, and in the inferential statistics section; One-sample t-test and ROI formula were used to analyze the data and test the hypothesis. All statistical analysis process in this study was used with SPSS22 software and Excel software was used to draw graphs.

Question 1: What is the reaction rate or satisfaction of the participants in the school management ethics training course?

Table 3 shows the significance of the one-sample t test. According to this table, the course participants were relatively satisfied with components such as evaluating the content of the training, evaluating the teaching method and the teacher's mastery of the presented materials, as well as evaluating the organization of the course.

Table3: One-sample t-test results related to the level of reaction or satisfaction of managers

Variable	t value	df	Sig.	Mean difference	α=0.05	
					Low limit	Upper limit
Reaction	68.893	319	0.001	64.722	62.87	66.57

Question 2: How much do the participants learn in the course of moral excellence in school management?

In order to analyze the data, one-group pretest and post-test were used. Therefore, the findings in Table 4 show that the calculated t is significant at the alpha level of 0.01. Therefore, it can be said with 99% confidence that learning has taken place in this group.

Table 4: Results of one-sample t-test for scores obtained from managers' learning test

Variable	t value	df	Sig.	Mean difference	α=0.05	
					Low limit	Upper limit
Learning	134.531	319	0.001	16.731	16.49	16.98

Question 3: What is the impact of school management ethics program on participants' job performance?

In order to analyze the data, one-group pretest and post-test were used. Therefore, the findings in Table 5 show that the calculated t is significant at the alpha level of 0.01. Therefore, it can be said with 99% confidence that learning has taken place in this group.

Table 5: Results of one-sample t-test for scores obtained from job performance

Variable	t value	df	Sig.	Mean difference	α=0.05	
					Low limit	Upper limit
Job performance	134.531	319	0.001	16.731	16.49	16.98

Finally, in this study, monetary value (return on investment) was calculated as the last step in evaluating the effectiveness of the school management moral excellence training course. The findings of the present study showed that the return on investment in the excellence program is possible.

DISCUSSION

Numerous studies consider the quality of school leadership and management as the key to school success and student achievement. Because school management in today's world is not just about managing, organizing, supervising and guiding and creating order in the school (16), but today

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educational leaders in schools must have special moral characteristics and professional skills to be able to meet the needs of the school (17). On the other hand, most experts believe that an organization can provide the conditions for organizational growth and excellence when it pays serious attention to ethics in training and improving human resources (18). From this perspective, ethical management in order to increase productivity and improve quality has always been one of the most important issues and concerns of organizations (19), especially in the education organization, which is more difficult to calculate indicators due to the production of intangible products. The ethical model of school management excellence, which focuses on the three characteristics of ethics, school-centeredness and participation of all school stakeholders. They have courses, professors and organizers. However, it seems that the lack of attention to learning styles and the adoption of appropriate teaching methods in some cases was the reason for the lack of 100% satisfaction. According to the findings of this study, one of the reasons for the desirability of what managers have learned from training courses can be attributed to their favorable reaction to the courses held. This finding is consistent with the results of some studies that state that ethics in the education system can lead to satisfaction and satisfaction increases motivation (20)

In response to the second question of the present study and the findings, it can be said that one of the factors for managers to learn was the coordination and relevance of the content presented in the training course with their job and education. Other factors involved include the ability of the instructors of these courses, who may have had a relative ability in terms of expertise, commitment and awareness, power of expression and understanding of the material to the learners. Despite the challenges, the findings of the third question of this study showed that when learning is done in a desirable way, its transfer to the work environment and behavior can also be done in a desirable way. Findings of this study in the field of behavior and the extent of applying the lessons learned by managers in the workplace also show that the participating managers applied their learnings to an acceptable level in the workplace and school. Since one of the reasons for the importance of organizational training is the use of what is learned in the work environment, the findings of this study indicated that many school principals implementing the excellence program have the necessary motivation and opportunity to use what they have learned. They have had while working and the conditions have been such that managers can easily apply what they have learned in the work environment. Also, according to the findings of this study, in order to change the behavior of participants, organizational results such as job satisfaction, increasing job commitment and achieving goals that are directly related to the organization have occurred. These findings are consistent with many research findings (21-26).

In this study, monetary value (return on investment) was calculated as an evaluation of the effectiveness of the school management ethics training course. The findings of the present study showed that the return on investment in the excellence program is possible. Also, the results of the present study showed that investing in the ethical training of managers in the education organization has a positive effect on the overall productivity of this organization. This finding suggests that educational designers can use ROI evaluation to increase the alignment of education with the needs of education as well as to improve the efficiency, quality and development of the education cycle. These findings are in line with the results of research by some researchers (27-29)

Based on the research findings, it is suggested that the moral education of school principals be considered at the macro level and that various training courses be adopted to teach moral behavior at the individual and social levels for the human resources of educational organizations.

CONCLUSION

The quality of leadership and ethical management is the key to the success of schools and the successful achievements of students. Because school management in today's world is not just about managing, organizing, supervising and guiding and creating order in the school. Rather, educational leaders in schools today must have special personal characteristics and professional skills to be able to meet the growing needs of students and society. An organization can provide the conditions for organizational growth and excellence when the need

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for training and moral and professional improvement of human resources in that organization is seriously considered. In general, according to the findings of the present study, it can be acknowledged that the school management ethics program has relatively been able to rely on the document of fundamental change, while focusing on management processes, to provide conditions for all effective factors in While identifying its internal and peripheral capacities and capabilities, the school management adopts a program-oriented approach to setting goals and designing the school action plan, improving the quality and quality of school management and increasing productivity.

ETHICAL CONSIDERATIONS

Ethical issues (such as plagiarism, conscious satisfaction, misleading, making and or forging data, publishing or sending to two places, redundancy, etc.) have been fully considered by the writers.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.

REFERENCES

1. Mirkamali SM. Ethics and social responsibility in educational management. Journal of Educational Psychology and Management, 2003; 33(1): 201-221. (In Persian).
2. Abili K, Kharazi S K, Sobhaninejad M, Yozbashi A. Develop an effective model for learning transfer in order to return on investment in human resource development with emphasis on urban management of organizations. Journal of Urban Economics and Management, 2015; 3. (In Persian).
3. Abbaspour A. Advanced human resource management (approaches, processes and functions). 11th ed. Iran/Tehran: Samt Publication. 2018. (In Persian).
4. Ziaee MS, Roushandel T, Mohammadnejad M. Evaluation of Saipa's training programs using return on investment (ROI) model. Journal of Organizational Resource Management Research, 2011; 1(3). (In Persian).
5. Starratt RJ. Building an ethical school: a theory for practice in educational leadership. Educational aAdministration Quarterly, 1991; 27(2). DOI: https://doi.org/10.1177/0013161X91027002005
6. Mohammadpour-Zarandi H, Tabatabaei-Mazdabadi S M. Organizational training management (with emphasis on urban capital development). Tehran: Road, Housing and Urban Development Research Center. 2015. (In Persian).
7. Park Y, Jacobs R L. The influence of investment in workplace learning on learning outcomes and organizational performance. Human Resource Development Quarterly, 2011; 22(4). DOI: https://doi.org/10.1002/hrdq.20085
8. Abili K. The need to evaluate in-service training courses in organizations. 14th Conference of the Ministry of Culture and Higher Education, 1993; 3(5). (In Persian).
9. Baniasad S, Hoseingholizadeh R, Khandaghi M. From effectiveness to excellence: breaking theory, research, and practice in the school management excellence program. Journal of Fundamentals of Education, 2017; 7(2): 124-148. (In Persian).
10. Shefali S. ROI of training and development programs: challenges and developments. The SIJ Transactions on Industrial, Financial and Business Management (IFBM), 2014; 2(6).
11. Nejati N, Maetoofi A, Farhadi Mahalli A, Ghaffari R. Provide a model for evaluating public policy with an emphasis on professional ethics. Int. J. Ethics Soc. 2021 3(1) :24-32. DOI: https://doi.org/10.52547/ijethics.3.1.24
12. Mohamed A, Rasli A, Abu Mansor N N. Business impact and ROI: A proposed approach to learning and development investment. Social and Behavioral Sciences, 2012; 40: 596-603. DOI: https://doi.org/10.1016/j.sbspro.2012.03.236
13. Matalonga S T, Feliu S. Calculating return on investment of training using process variation. IET Software, 2012; 6(2):140–147. DOI: 10.1049/iet-sen.2011.0024
14. Fathi Vajargah K, Dousti H. A practical guide to calculating ROI in ROI training. Tehran: Iran Industrial Training and Research Center Publications. 2015. (In Persian).
15. Danaeifard H, Salehi A. Research design (quantitative, qualitative and combined approaches). 1st ed, Tehran: Nashre Mehraban. 2012. (In Persian).
16. Murray C. High school principals' understanding of instructional leadership: an emerging theory. [Ph.D. Thesis], Canada: University of Calgary. 2015.
17. Sugrue C. Principal professional learning: sources of sustenance? Unmasking school leadership. 1st ed, Springer. 2015.
18. Danaeifard H, Emami S M. Qualitative research strategies: A reflection on data foundation theorizing. Journal of Management Thought, 2007; 1(2): 69-97. (In Persian).
19. Mohaghar A, Seyed Kalali N, Soleimani-Damaneh R, Akhavananvari M. Introducing European, American and Japanese models of quality excellence and their comparative study in the process. 2nd National Conference on Organizational Process Management, Tehran, Iran. 2011. (In Persian).
20. Shayan S, Nouruzirad N. Determining the effectiveness of written training programs for the staff of Taleghani Hospital in Tehran based on the Kirk Patrick model.Journal of Teb va Tazkiye, 2019; 280(2): 10-23. (In Persian).
21. Mobin M, Rahimi Kermani M. Evaluating the effectiveness of training courses by Kirk Patrick method (Case study of power distribution network troubleshooting course). 33rd International Conference on Electricity, Tehran. 2018.

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[DOI: https://doi.org/10.52547/ijethics.4.1.10]

22. Shafighnia M, Vahedi M, Rezaei A. Investigating the effect of school management excellence plan on improving the quality of education in girls' high schools in district one of Tabriz. Journal of Psychological Studies and Educational Sciences, 2017; 3(4): 201-214. (In Persian).
23. Sabzipour A, Farajollahi M, Sarmadi MR, Ghafari H. Designing a model for return on investment in the distance education system. Journal of New Approaches in Educational Administration, 2018; 9(3): 45-67. (In Persian).
24. Alipour E. Provide a model of return on investment in higher education. Quarterly Journal of Educational Management and Leadership, 2019; 13(2): 149-165. (In Persian).
25. Parsa A, Shahi S, Nisipour M. Evaluating the effectiveness of Makram training program in Maroon Oil and Gas Exploitation Company. 3rd National Conference on Education and Development of Human Capital, Tehran. 2015; (In Persian).
26. Nassir Gharechedaghi N, Fartash A, Ghotbi A. Evaluating the effectiveness of e-learning courses based on the Kirkpatrick model. J. Basic. Appl. Sci. Res., 2012; 2(6): 5636-5643.
27. Santiago A, Vinson E, Warren M, Lierman A. Evaluating academic library outreach to determine return on investment for student success. Journal of Library Administration, 2019; 59(4): 359-372. DOI: https://doi.org/10.1080/01930826.2019.1593709
28. Smith R, Knapp K. Return on instructional investment (ROII) model: A practical guide for school leaders. Academy of Educational Leadership Journal, 2019; 23(1).
29. Del Bo Chiara F. The rate of return to investment in R&D: The case of research infrastructures. Technological Forecasting and Social Change, 2016; 112(C): 26-37. DOI: http://10.1016/j.techfore.2016.02.018.

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