



## Evaluation the Educational Quality Performance of Islamic Azad University, Karaj Branch, Based on Kirkpatrick's Model

Vahideh Alipour<sup>1</sup> and Amir Hossein Rahnamaei<sup>2\*</sup>

<sup>1</sup>Assistant Professor (Ph.D), Karaj Branch, Payame Noor University (PNU), Karaj, Iran.

<sup>2</sup>M.Sc. Student, Educational Planning, Department of Management Education, Karaj Branch, Islamic Azad University, Karaj, Iran.

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### ABSTRACT

There are various models to evaluate educational quality performance of high educational systems in which the Kirkpatrick's model has been described as comprehensive, simple, and practical model form many educational situations and has been known as a criterion in this field by many specialists. The objective of this research is evaluating educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model. The methodology of this research is surveying-descriptive and statistical population includes all managers and students of Islamic Azad University, Karaj branch with 34,100 members. Sampling method was stratified random sampling method and 384 members were selected according to population volume based on table randomly. The used instrument was the researcher-made questionnaires, which was designed according to input, output, process, and content sub-scales, then face and content validity was determined by specialized professors, and research reliability was determined 0.75 by Cronbach alpha coefficient. Single-sample statistical t-test to test research hypotheses. In order to test the main question of research based on education quality performance in Islamic Azad University, Karaj branch, it was observed according to the obtained scores from questionnaire and results of t-test that education quality performance situation in Islamic Azad University, Karaj branch, is higher than average (good) level. According to investigate and test the secondary questions, it was observed that education quality performance in Islamic Azad University, Karaj branch has average (good) level. In addition, the input dimension of education quality performance in Islamic Azad University, Karaj branch has average level. The education performance in process and output dimensions was observed in good level.

### Keyword:

Performance, educational quality, Kirkpatrick, Islamic Azad University, Karaj branch

\* Corresponding author: Rahnamaei

[Amir.rah1982@gmail.com](mailto:Amir.rah1982@gmail.com)

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**Introduction**

No one is independent from education in today sophisticated world. Humans find their essence in light of education and make them different from other creatures. On the other hand, communities grow and evolved. In the present era, no country will be able to survive without leaning and utilization from modern technics and sciences, and technological developments and advances won't be possible, unless to have an educational system in high qualitative and quantitative level. High education as a part of educational system whose important objective is creativities, inventions, and innovation, and growing committed and specialized human force in various community fields has key and vital role in national development of state. Of course, achieving this objective is in light of high education and coordination with its activities by movement toward knowledge and having familiar human force to advanced scientific and sophisticated developments. On the other hand, it has passed many years that performance evaluation in organizations is significantly important. Evaluating performance has found specific status in sciences by organizations development and countries industrialization. The gradual extension of organizations and increasing sophistication and competitiveness in quality and sense of need to development has doubled importance of performance evaluation in organization. Evaluating is the main responsibility of each organization that measures achievement to objective by investigation and studying about people performance and provides contexts of removing obstacles, modifying methods, and finally passing other steps of movement and individual growth in organization. In addition, it is proved today that success of a state in cultural, social, political, and economic fields are tied to have an integrated and dynamic educational system and just having such system can be adapted with social and industrial evolution and developments and have deserved status among the world successful countries; in this regard, an accurate and scientific evaluation is necessary in order to express advantages, disadvantages, advancing ways, its modification, and also accomplishment the objectives, and generally an imagine from the situation of educational system effectiveness. Of course, this evaluation should be based on scientific principles and based on the mentioned objectives to have assured results. Evaluation is one of the most important planning steps which accurate implementation will provide useful information about the manner of designing and educational plans implementation and yield useful bases to evaluate educational performance of educational centers.

**1-2- Problem Statement**

Universities and high education centers have been always considered as the highest center of thinking and producing community sciences, and these centers have serious role in scientific promotion and direction of intellectual, doctrinal, cultural, and political movements of society by presence and intellectual activities of thinkers, researchers, scholars' and students. Universities need a proper model and tool to evaluate and assure about quality of related plants and processes procedures, efficiency, and effectiveness of gradutors in occupation market to do their great tasks, dynamism, and promotion. On the other hand, the high

educational system of state should try by accurate planning in educational, research, and treating human force to increase productivity and using the present capitals in state optimally, and to be promising for prosperity and scientific and cultural authority more than ever. In order to protect its dynamism, university needs developmental and strategic planning of improving process, methods, and permanent controlling of quality. Doing each mentioned affair or process need real, accurate, related, and updated information along with accurate planning. Supreme Council for Cultural Revolution formulated the main elements and supreme indexes in macro and micro evaluation extension including general sectors public, educational, research, student, cultural, credits, and facilities in qualitative and quantitative dimensions in order to evaluate and explore high education and formulation indexes and regulations of evaluation using global studies in high education specialized field such as evaluation models of high education, international network model of quality assurance in high education, the proposed index by UNESCO, etc. In educational sector, the educational indexes include qualitative, quantitative, and analytical indexes which are related to faculty members, plans, educational facilities and curriculum, educational experts, education levels and grades, etc. The effective factors in evaluation performance are efficiency, quality, entrepreneurship, or effectiveness of high education attempts in studying the various spectra resources. One of important steps for modification in each community structure such as high education is evaluation, since universities are responsible of providing transparent answers to society needs, the transparency, accountability, and quality improvement are necessary in them, and it is vital for them to have anxiety of improving their services quality permanently. Three main factors of quality, cost, and productivity are particularly mentioned in universities and high educational centers; however, quality is more important than two other factors, because it is believed that cost and productivity are somehow influenced by quality. Of quality improves, the cost reduces, and productivity increases. The studies of researchers about educational quality in Iran universities offered different results; as though, Beheshti Rad (2012), Enayati Novinfar et al. (2010), Khatibi et al., (2011), Gorji et al. (2010), Seyed Kalan et al. (2012) in their studies reported the presence of negative gap in educational quality of universities, while Dadashzadeh (2014) reported educational environment quality of his research is desirable level. Therefore, responsibility and accountability of educational system and assuring quality are based on quality evaluation. The conceptions of quality, efficiency, and effectiveness are mentioned in evaluating the educational systems. Quality has direct relationship with efficiency and effectiveness. There are various models in order to evaluate quality performance of high educational centers among which the Kirkpatrick's model has been described as a comprehensive, simple, and practical model for many educational situations and has been known as a criterion in this field by many specialists. In two past decades, universities faced with a little extra extension and descending procedure in high educational quality in past decade. University activities and performance has been questioned by various dimensions

today whether high educational centers have proper planning and organization? Is the objective is selected properly? Do executive mechanisms and processes guide us to our objectives? Is there necessary proportion among universities activities and economic and social capacities? Since education should be considered not as organizational cost, but as a parts of organizational responsibility and type of capital, an accurate and scientific evaluation about education is necessary to express accomplishment the objectives and generally imagine of its effectiveness in that field.

As it was explained, the present research aims on explaining educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model.

**Objectives**

**Main objective:**

Evaluating educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model

**Secondary Objectives**

- evaluating the content dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model
- evaluating the input dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model
- evaluating the process dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model
- evaluating the output dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model

**1-5- Main Hypothesis**

The condition of evaluating educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model is good.

**Secondary Hypotheses**

- evaluating the content dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model has efficient quality
- evaluating the input dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model has efficient quality
- evaluating the process dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model has efficient quality
- evaluating the output dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model has efficient quality

**Methodology**

The methodology of this research is applied according to objective and descriptive according to method. Since this study evaluates educational quality performance in Islamic Azad University, Karaj branch and accessibility to all data of Kirkpatrick evaluation levels is not possible, the related data to students' reaction level to educational quality, which was collected by questionnaire, was analyzed. According to this model, evaluation should always start from the first level then second, third, and fourth levels should be considered. Information of each level should be considered as basis of the next level. Therefore, each consecutive level offers more accurate criterion for effectiveness of curriculum, but it needs more accurate analysis, simultaneously.

**3-3 Statistical Population and Sample**

Statistical population of this research includes all students and managers of Islamic Azad University, Karaj branch with 34,100 members. The sampling method was stratified random sampling. Morgan table was used in this research to estimate sample volume and sample was considered with finally 384 members.

**3-4- Data Collection**

Kirkpatrick questionnaire was used to collect data which was based on Likert scale. The mentioned questionnaire has 16 questions in Kirkpatrick's model reaction level and based on five-point Likert scale from weak, medium, good, very good, and excellent. The validity of questionnaire was confirmed by 5 professors and its reliability was obtained 0.75 by Cronbach's alpha coefficient that is in acceptable level. The sub-scales of questionnaire include input, process, output, and content, and related questions to each sub-scale is as following:

- Evaluating input sub-scale: questions 1-5
- Evaluating process sub-scale: questions 6-9
- Evaluating output sub-scale: questions 10-13
- Evaluating content sub-scale: questions 14-16
- studying the latest scientific breakthroughs about evaluating educational quality performance using internet and librarian studying.
- investigating documentaries of Islamic Azad University about job descriptions and educational system

**Statistical Inference**

Findings of research were analyzed using single-sample t-test and questions were answered.

**Main hypothesis:** the condition of educational quality performance in Islamic Azad University, Karaj branch is good.

**Table 4-6: single-sample t-test based on condition of educational quality performance**

Descriptive statistics		T statistics		
Average	St.Dev	Average equivalent value=3		
3.23	0.33	T	Freedom degree	Sig. level
		13.482	383	0.0001

According to above table,  $P < 0.01$  and  $T(384) = 13.428$  showed that educational quality performance (average=3.23 and st.dev= 0.33) is significant from the average value 3. Therefore, it can be concluded that condition of educational quality performance in Islamic Azad University, Karaj branch is higher than average level (good).

**Secondary Hypotheses Test:**

H1: the content dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model has efficient quality.

**Table 4-7: single-sample t-test based on content dimension of educational quality performance**

Descriptive statistics		T statistics		
Average	St.Dev	Average equivalent value=3		
3.36	0.513	T	Freedom degree	Sig. level
		13.904	383	0.0001

According to above table,  $P < 0.01$  and  $T(384) = 13.904$  showed that content dimension of educational quality performance (average=3.36 and st.dev= 0.513) is significant

from the average value 3. Therefore, it can be concluded that condition of content dimension of educational quality performance in Islamic Azad University, Karaj branch has efficient quality.

H2: the input dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model has efficient quality.

**Table 4-8: single-sample t-test based on input dimension of educational quality performance**

<i>Descriptive statistics</i>		<i>T statistics</i>		
Average	St.Dev	Average equivalent value=3		
3.01	0.575	T	Freedom degree	Sig. level
		0.337	383	0.0001

According to above table,  $P > 0.05$  and  $T(384) = 0.337$  showed that input dimension of educational quality performance (average=3.01 and st.dev= 0.575) is significant from the average value 3. Therefore, it can be concluded that condition of input dimension of educational quality performance in Islamic Azad University, Karaj branch has average (good) level of quality.

H3: the process dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model has efficient quality.

**Table 4-9: single-sample t-test based on process dimension of educational quality performance**

<i>Descriptive statistics</i>		<i>T statistics</i>		
Average	St.Dev	Average equivalent value=3		
3.33	0.707	T	Freedom degree	Sig. level
		9.145	383	0.0001

According to above table,  $P < 0.01$  and  $T(384) = 9.145$  showed that process dimension of educational quality performance (average=3.33 and st.dev= 0.707) is significant from the average value 3. Therefore, it can be concluded that condition of process dimension of educational quality performance in Islamic Azad University, Karaj branch has higher than average (good) quality.

H4: the output dimension of educational quality performance in Islamic Azad University, Karaj branch based on Kirkpatrick's model has efficient quality.

**Table 4-10: single-sample t-test based on output dimension of educational quality performance**

<i>Descriptive statistics</i>		<i>T statistics</i>		
Average	St.Dev	Average equivalent value=3		
3.298	0.771	T	Freedom degree	Sig. level
		7.595	383	0.0001

According to above table,  $P < 0.01$  and  $T(384) = 7.595$  showed that output dimension of educational quality performance (average=3.298 and st.dev= 0.771) is significant from the average value 3. Therefore, it can be concluded that condition of output dimension of educational quality performance in Islamic Azad University, Karaj branch has higher than average (good) quality.

#### **Suggestions**

Each research is reported by hope of continuing methods and studying about that issue and providing to researchers.

Therefore, the necessity of each report is suggestions to smooth path for further studies. This research is not exceptional in this matter and the following suggestions are offered:

- it is suggested to continue this procedure based on various evaluation models for educational quality in further studies and the results in tables are compared to each other to find the most applicable model.
- It is suggested to use other methods for evaluating educational quality performance.
- It is suggested to educational quality performance in other non-profitable and state universities.
- It is suggested to use four evaluation levels of Kirkpatrick's model for educational quality performance.

#### **Persian References**

- 1- Kh., Abili (2002). Analysis of the performance evaluation system of government employees. Knowledge Management. 58: 5-20
- 2- Gh., Ahmadi, S.H., Hakimi. (1996) the problems existing practices evaluated and assessed valuation perspective, Journal of Management in Education, Issue 26.
- 3- F. Akhlagh, M.H., Yarmohammadian, M., Khoshgam, N., Mohebi (2011) Evaluation of quality of educational programs in higher education use patterns, health management magazine, 8<sup>th</sup> period, No. 5, December, 621-629.
- 4- Sh. Elahi (1999), "performance triangle", Proceedings of the Second Festival of Martyr Rajaei, assessing the performance of executive bodies of Iran, Tehran, employment affairs of the country.
- 5- M. Amiri Mehr (2006), the effectiveness of corporate training courses in the model of SAIPA Diesel Patrick, M. Sc., Shahid Beheshti University.
- 6- A., Baazargan (2013) its quality and evaluation in higher education at the national and international experience. Proceedings of the First Seminar of Higher Education in Iran, Volume I: Tehran: Allameh Tabatabaei University Press
- 7- F. Bagherian (2004) Learning in Higher Education N. Ghurchian, HR., Arasteh, P. Jafari, encyclopedias Higher Education Vol. 2. Tehran Great Persian Encyclopedia Foundation.
- 8- S.H., Bula (1990) evaluation for development projects and training programs. Translation translated by Dr. Kh., Abili (1996). Tehran Publications International Institute for Adult Education.
- 9- G. Tavakoli (2010) Evaluation of short courses training students from public libraries of Astan Quds Razavi based on the first level model Kirkpatrick, Volume 2, Issue 6: PP: 1-6
- 10- H., Hojati, Y., Mehralizadeh, H., Farhadi, S., Aludastani, M., Aghamollaei, A., Eshbal, Gh., Nobaghi; (2013) evaluate the effectiveness of in-service training of nurses on the model Patrick Case Study: Jurjani Gorgan Hospital, Journal of Nursing Management, second year, Volume II, No.3, fall, pp: 35-42
- 11- N. Daneshvar (2005) Higher Education and endogenous development, the first Congress of the free software movement and thinking.

- 12- E., Derakhshan (2012) evaluate the effectiveness of higher degree students at Shahid Chamran field of knowledge and specialized education centers Police Kirkpatrick pattern, MA thesis, University of Police.
  - 13- Gh. Rahimi (2006), "performance evaluation and continuous improvement of the organization", Journal Tadbir, No. 173
  14. Salis, Edward (2001) Total Quality Management in Education. Translation: S.A., Hadighi.
  - 15- A.A., Seyf (2014). Measurement methods and educational evaluation. Tehran. Publication Doran
  - 16- S.M., Seyed Kalan, L. Ayari, H. Ahmadi, (2012), evaluation of academic quality components Case Study: University of deprived areas in Ardebil province, Proceedings of the Second National Conference and the Ninth Congress of quality assessment systems academic, pp: 144-155.
  - 17- G., Shojaei, (2011), evaluation the effectiveness of in-service training programs for employees Ferdowsi University of Mashhad, M. Sc., Mashhad Ferdowsi University.
  - 18- Gh., Tabarsa (1999), "reviewing and clarifying the role of strategic requirements in choosing an evaluation governmental organizations", Proceedings of the Second Festival of martyr Rajai, evaluation the performance of executive agencies, Tehran: State Administrative and Employment Affairs Organization.
  - 19- F. Talebi Kahdouei, (2001), Strategies -applicable evaluation system in the Institute of Agriculture, Science Education Conference - functional.
  - 20- B., Eynollahi P., Sigarudi, F., Amir Niyaei, et al. (2005), New Evaluation of Medical Education, Ministry of Health, Treatment and Medical Education – training assistant.
  - 21- H., Gholami, H.R., Nooralizadeh and (2002), "Comparison of Performance Evaluation", Proceedings of the First International Conference on Performance Management, Tehran: the university Jihad, Tehran University Management School.
  - 22- K. Fathi, N., Shafiei (2007) assess the quality of university curriculum, curriculum Iran Quarterly, No.5.
  23. Kaufman. Herman Rogers. 1991. Jerry strategic planning in the educational system. Translation F., Mashayekh and A. Baazargan 1995. Tehran. Press Madreseh
  - 24- T., Karimi (2006), "The new models, performance evaluation", Journal Tadbir, No. 171
  - 25- A., Kiyamanesh (2014) evaluate what is and what is not, Journal of Education, No. 12.
  26. UNESCO Advisory Group. Educational planning process. Translation F. Mashayekh 1994. Tehran Madreseh Press
  - 27- R., Mohammadi, J. Fathabadi et al. (2007) evaluation quality in higher education publications center of National Education Assessment Organization.
  - 28- R., Mohammadi (2008) internal evaluation of Pure and Applied Mathematics Departments of Amir Kabir Industrial University. MA thesis Faculty of Educational Sciences of Tehran University.
  - 29- A., Mohamamdi, M. Masoud Vakili (2010) assess the quality of students' educational services in Zanjan University of Medical Sciences, Journal of Medical Education Development, Vol. 3, No. 5, Fall and Winter.
  - 30- A.H., Mahmudi, et al. (2012) Evaluation of the Effectiveness of the Kirkpatrick education dealership personnel certified company based on the evaluation of managers and staff perspective, Journal of Cultural Management, Volume 6, Issue 18, pp. 119 to. 134 p.
  - 31- M. Najmi, H, Zarei (2002), "interaction and confrontation, EFQM, BSC" Proceedings of the First International Conference on Performance Management, Tehran University Jihad, Tehran University Management School.
  - 32- N. Nasir Gharch Daghi, (2010), evaluating the effectiveness of e-learning courses based on Kirkpatrick, MA thesis at Shahid Beheshti University.
  - 33- Sh., Yazdani (2008) developed educational system, the health institute development prospects.
- Latin References**
1. Akker J. van den (2004). Curriculum perspectives: An introduction. In J. van den Akker I W. Kuiper I & U. Hameyer (Eds.)1 Curriculum landscapes and trends (pp. 1-10). Dordrecht1 the Netherlands: Kluwer Academic.
  2. Barrow K , Leu E. Perceptions of Namibian teachers and other stockholders of quality of education. American Institutes for Research under the EQUIP1 LWA. 2006.
  3. Barnes BR. Analyzing Service Quality: The Case of Post-Graduate Chinese Students. Department of Marketing, Leeds University Business School, University of Leeds, UK. 2005.
  4. Byars, L. I & Rue, L. W. (2008). Human Resource Management: 9 th Edition. New York: Mc GrawHill.
  5. Bernardin, H. J. (2003). Human Resource Management: an experiential approach. 3 th Edition. New York: Mc GrawHill.
  6. Carell Micheal R and et al. (1992). Personnel/ Human Resource Management. Mac Millan. Publishing.
  7. Foot. M and Hook. C (1999). Introducing Human Resource Management. Longman.
  8. Foxon, Marguerite , Coopers & Lybrand)1991), Evaluation of training and development program , Australian Journal of Educational Technology.
  9. Ghalayini, A. M. , Noble, J. S. and Crowe, T. J. (1997), "An Integrated Dynamic performance Measurement system for Improving Manufacturing competitiveness ,"International Journal of Production Economics, Vol. 84,pp. 20
  10. Hall MA, Daly BJ, Madigan EA. Use of anecdotal notes by clinical nursing faculty: a descriptive study. J Nurs Educ 2010; 49(3): 156-9.
  11. Ham L, Hayduk S. Gaining Competitive Advantages in Higher Education: Analyzing the Gap between Expectations and Perceptions of Service Quality. International Journal of Value-Based Management. 2003; 16: 223-42.
  12. Hder, Jack (2003), Evaluation, MILIEU kontaktoosT – EUROPA.
  13. Hill Y, Lomas L, MacGregor J. Students' perceptions of quality in higher education. Quality Assurance Education. 2003; 11: 15-20
  14. Ivancevich, J. M. (2007). Human Resource Management. New York: Mc GrawHill.

15. Izadi, m. 1996 quality in higher education, journal of industrial teacher education: journal of industrial teacher education.
16. Kaplan, R. S. and Norton, D. P. (1992), "The Balanced scorecard: Measures that Drive performance", Harvard Business Review, January-February, pp. 9-71
17. Kirkpatrick , D. L(1998),Evaluating Training Program,Sanfrancisco,
18. Longenecker, Clinton O. and Nykodym, Nick (1996). Public Sector Performance appraisal effectiveness: A Case Study, Public Personnel Management. Vol. 25. No. 2, Summer.
19. Mahmoodi Z. Evaluation of Master's Dgree Program of Medical Records from Viwe Point of Graduates [MSc Thesis]. Tehran: School of Psychology and Educational Sciences, Tehran University; 2004. - Salvatore, Falletta (1998), Evaluating Training Program: The four levels by Donald Kirkpatrick, American, Journal of Evaluation. Vol. 19. N. 2.
20. Mccoy, maired. Hargie, Owen D. W (2001), Evaluating evaluation: implications for assessing quality,International Journal of Health Care Quality Assuran ce.
21. Noe, R. A, Hollenbeck, J. R, Gerhurt, B & Wright, P. M. (2008). Human Resource Management: gaining Competitive advantage. New York: Mc GrawHill.
22. Roberts, Gary E. and Pavlak, T. (1996). Municipal government Personnwl Professional and Performance appraisal: Is there a consensus on the characteristics of an effective appraisal system? Public Personnel Management, Vol. 25. No. 3, Fall
23. Salvatore, Falletta (1998), Evaluating Training Program: The four levels by Donald Kirkpatrick,American ,Journal of Evaluation. Vol. 5, No. 34, 126- 134.
24. Scheerens J, Bosker RJ. The foundations of educational effectiveness. 1st ed. New York: Elsevier; 1997.
25. Singh MD. Evaluation framework for nursing education programs: application of the CIPP model. Int J Nurs Educ Scholarsh 2004; 1: Article13.
26. Snell, S. A & Bohlander, G. W. (2007). Managing Human Resources. Thomson Publishing Company.
27. Stredwick John (2005) An Introduction to Human Resource Management. Elsevier Ltd.
28. The board of regent of the University of Wisconsin system, Clinical investigator preparatory program [Online]. 2005; Available from: URL: <http://www.medicine.wisc.edu/mainweb/>
29. Tomovick C, Jones S, Al-Khatib J. An assessment of the service quality provided to foreign students at U. S. business school. Journal of Education for Business. 1986; 70: 130-7.
30. Westbrook JI, Callen J, Lewis M. A glimpse into the future: a survey of the expectations and ambitions of Australian health information management students. Top Health Inf Manage 1997; 18(2): 77-86.
31. Worthen Blaine, r. and James r. sanders. 1987. Educational evaluation: alternative approaches and practical guidelines. New York: Longman
32. Yarmohammadian MH, Kalbasi A. Internal Evaluation of Deepartments in the School of Management and Medical Informatics, Isfahan University of Medical Sciences. Iranian Journal of Medical Evaluation 2006; 6(1): 123-53.