

# School Principals' Need Analysis in Perceptual, Human and Technical Skills Areas (Case Study: Tehran's Gifted Students' Schools)

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**Abstract:** The present study aims at identifying the needs of Tehran's gifted students' schools principals in regard of the areas like technical, human and perceptual skills. The study adopts a survey method. The study population included Tehran's gifted students' schools headmasters reaching a total number of 113 individuals out of whom 87 individuals were selected based on Cochran formula. The study sample volume has been selected based on a stratified randomized method. From among the schools, the school masters and two of their vice principals were selected. 29 schools were involved in the survey and three individuals answered to the questionnaires from each school and totally 87 individuals filled the intended questionnaires. According to the study findings, it can be said that the managers are in a good situation but they are required to participate in in-service instructional courses so as to elevate their efficiency and job accomplishment as well as taking major parts in increasing the effectiveness and efficiency to, finally, enhance productivity. Based on the results obtained from running need analysis on the gifted students' schools principals in terms of technical, perceptual and human skills, the study findings indicate that headmasters are required to take serious measures in perceptual and human skills but they are in a better status in technical skills. To elevate effectiveness and job accomplishment and playing major parts in augmenting effectiveness and efficiency in gifted students' schools they need to participate in in-service instructional courses so as to be able to eventually heighten their productivity levels.

**Keywords:** educational need analysis, educational headmasters, human skills, technical skills, perceptual skills

## INTRODUCTION

Programming is always the essential principle of every activity in such a manner that before setting out an activity the first step is having a plan and a program in the mind to facilitate goal-achievement. Every activity would be fruitless and there would be little chances to get to the objectives unless an objective and a roadmap is specified (Lewin, 2015). Education Ministry every country is responsible for the most genuine duty of individuals' teaching and education. Education Ministry facilitates the development process in the countries through playing roles in enhancing the human capitals' output, renewing the attitudes, creating nations, improving the individuals' sociability, increasing the participation and administrating the affairs and elevating the quality of life (Kraft et al, 2015).

Principals' duty is highly significant since they are engaged in the education of the society's individuals and this is why there is felt a need for doing research regarding this group of the society members. There is a scarcity of research on schools, particularly the gifted students' schools headmasters who are to cope with talented students all of whom are considered as huge capitals of a country and can bring about a brilliant future for themselves and their countries in case of being correctly guided. The present study intends to figure out the needs that gifted students' schools principals might have so as to take more scientific and well-informed measures in this regard (Montecinos, Walker and Maldonado, 2015).

Managerial skills are among the issues that have drawn a lot of attention since the beginning of management evolution and they have been approached through various methods. Skills needed for the school masters can be divided into three sets of technical, human and perceptual (Afshari et al, 2010). Bourgman and Brush (1993) performed one of the most widespread studies in various organizations on managerial skills and identified 18 skills needed by the managers. These skills are: effective communication, guidance, steerage, motivation, teaching the subordinates, administrating the affairs, organization development, preserving proper work relationships, creating coordination between the employees, recruitment, authorization, programming, organizing the tasks, decision-making, problem-solving, creating organizational commitment, having technical expertise and emphasizing on achieving the objectives. Betin (2001), as well, deals with the idea, in an article, that besides

having occupational skills, managers should possess personal qualifications such as courage, decisiveness, the ability to identify the opportunities, developing the participations, the ability to vest authority, entrepreneurship and creativity and the enjoyment of such managerial skills and individual qualifications is the prerequisite of effective management. Hasco (2006), also, in an article called "the lack of the skills, a barrier to work in groups" expresses the skills required for leadership as the main necessities required for team work. He knows appropriate team work as entailing the acquisition of the skills by the managers through assigning the team members and subordinates with responsibilities.

Afshari et al (2010) dealt with the survey of the threefold skill, namely perceptual, human and technical skills, in a study on physical education offices based in the entire universities of the country and they came to the conclusion that there is a significant difference between the three skill components of the physical education offices managers in all the country universities. From the perspective of the physical education offices managers and the sport management specialists, human skills are more superior in contrast to the perceptual and technical skills for the office managers.

The investigation of the backgrounds and the review of the available articles indicate that managers in various organizational levels need perceptual, human and technical managerial skills. Managers are considered as the most significant pillar of every organization and thus providing for their qualitative enhancement grounds can undoubtedly make this role more accentuated and underlined. With no doubt, managers' position highly depends on the amount of their discretion, knowledge and skill or competency and of course the extent they enjoy discretion, knowledge and skill as well as competency differs in various management ranks. On the other hand, managers or the supervisors, depending on the level in which they exert management, should be sufficiently enjoying perceptual awareness, general information and insight regarding the human behaviors and relations and finally specialized skills (Torkman and Afshar, 2010). Principals are the managers of the country and they are directly connected to the education and upbringing. These managers are engaged in the most significant and critical duty, to wit educating and rearing the human beings. Jalilvand and Eje'ee (1995) in a study on gifted and ordinary students from Tehran's schools found out that educational environment where the gifted and ordinary students' school can make differences in fostering the personality characteristics and such a difference not correlated with gender.

If educational managers' skills and qualifications are taken into consideration when assigning them to schools and the necessary expertise and competencies become the criteria for selecting them and the managers, as well, pay attention to the effects of applying the aforementioned qualifications in advancing the objectives, then there would be brought about an auspicious ground for optimally taking advantage of the entire array of the facilities and resources in the organization (Farzaneh, Purkarimi and Nowruzi, 2014).

Murray (2009) expresses that developing the principals' abilities, capacities and skills is considered as a key factor contributing to the enhancement of the teaching-learning process quality. Improving the quality of education requires enhancing the skills of the gifted students' schools principals and it is a factor influencing the elevation of their management level. Managing the gifted students' schools requires a unifying strategy that increases the activities' output through establishing improving systems and processes for attracting, developing, retaining and making use of the skills and capabilities required by the managers as well as making the talents proportionately fit the current needs (Purkarimi and Vahdati, 2014). Thus, finding, selecting and assigning managers to the gifted students' schools require the identification and analysis of the needs in terms of the three foresaid skills.

Since education ministry's prophecy is educating and rearing the efficient and entrepreneur human workforce capable of acquiring the necessary skills purposively and proportionately according to the society's needs, the education system planning should be necessarily based on fostering and developing perceptual, human and technical skills in gifted students' schools principals. Due to the same reason, the present study is seeking to investigate the schools principals' needs in terms of perceptual, human and technical skills. Therefore, the main question raised herein is that "what are the school principals' needs in terms of perceptual, human and technical skills?"

## STUDY METHODOLOGY

Based on the subject matter and in line with accomplishing the study objectives, the present study makes use of a descriptive research of survey type. The study population included all Tehran's gifted-students schools principals. The total number of the study population was 113 individuals out of whom 87 individuals were selected based on Cochran formula. Stratified random sampling method was used to select the study sample volume. Based on the method, the study population was divided into smaller and identical groups and then based on the

divisions in which certain proportions in terms of the resulted groups' volume have been observed, sampling, according to the determined volume size (study sample volume by the use of the specified formula) was carried out completely randomly. All the principals plus two of their vice principals from every school were to answer to the questionnaires. The total number of schools reached to 29 schools and three individuals from every school answered to the questionnaires and in sum 87 individuals were selected as the study sample volume. To gather the required data, in-service training need analysis questionnaire was applied in such a manner that after the study sample volume had been chosen, the author attended the intended schools and administered the questionnaires to the sample volume. Meanwhile explaining the study objectives and offering complete information regarding the intended questionnaire, the respondents were asked to fill it honestly and through using complete precision. In this way, the necessary findings for the survey of the study questions were collected. Finally, the one-sample t-test and Friedman's ranking test were applied.

The study instrument was a questionnaire containing 45 questions. The questionnaire was comprised of two parts. The first section incorporated the principals' individual characteristics such as gender, education level, work record, management history. The second part was consisted of 45 items that evaluated the three abovementioned skills. Technical skills were questioned in 12 questions, human skills were investigated in 18 questions and perceptual skills were assessed in 15 questions. The questions are scored in positive sentences based on a 5-point scale from "very much", "much", "medium", "a little" to "very little".

To determine the questionnaire reliability, there was made use of Cronbach's alpha in a way that first of all 30 individuals were selected from the study sample volume and the questionnaire was distributed among them and then Cronbach's alpha was calculated by the use of SPSS. It was found equal to 89% which is larger than the critical value of 70%, thus the questionnaire enjoys a high reliability.

### STUDY FINDINGS

As it was said, the study sample volume included 87 individuals, 43.6% female (38 individuals) and 64.4% male (49 individuals). Out of the study sample volume, 83.9% were married (14 individuals) and 16.1% were single (14 individuals).

#### Question One: what are the gifted-student schools principals' needs in terms of the perceptual skills?

According the fact that the study population included the principals of the gifted-student schools, the hypothetical mean has been considered as being equal to 4 due to the principals' skills and capabilities. The mean for the need announcement by the gifted-student schools' principals in terms of the perceptual skills indicators (the ability to establish human relations inside the organizations, the ability to employ group spirits and cooperation between the employees, the ability to make use of mass media in informing and encouraging people, paying attention to public relations and staying accountable to people's complaints and wants, being patient in confrontation with the administrative-human bottlenecks within the organization, avoiding perspective and opinion imposition to the staff) is found meaningfully lower in the variables related to the perceptual skills based on the difference between the score obtained and the hypothetical mean, 4, and this difference is found statistically significant. To supplement the analyses pertaining to the current questions, one-sample t test results has been presented below for the entire variables.

Table 1: The results of one-sample t-test for comparing the scores obtained and the hypothetical mean in terms of the perceptual skills

Group	t-value	Degree of freedom	Significance level	Mean difference	With a 95% confidence level	
					Upper level	Lower level
Perceptual skills	-3.725	86	0.013	-23.79	-37.07	-18.50

As it is observed in the above table, the amount of t-value obtained for the comparison of the obtained mean scores and the expected mean is -3.725 which is indicative of a value significant in 95% significance level. In other words, it can be sated with a 95% significance that gifted-student schools' principals are in need of perceptual skills in a significant manner.

#### Question Two: what are the needs of the gifted-student schools' principals in terms of human skills?

The mean announced by the gifted-student schools' principals in terms of the human skills indicators, the ability to draw proper organizational policies and strategies, the ability to transfer perspectives and thoughts to the addressees, the ability to recognize the capabilities and competencies of the staff and encouraging it to be

innovative and creative and the ability to analyze the situations in a realistic manner is found significantly lower than the hypothetical mean value, 4, according to the study sample volume's mean and level difference of the one-sample t test mean from the hypothetical mean, 4. So, it can be concluded that the perceptual skills indicators in gifted students' principals are found in a low level in a 95% significance level. Furthermore, the rest of the relevant variables pertaining to human skills are in a level close to optimum. To supplement the analyses pertaining to the above question, the following table presents the one-sample t test.

Table 2: one-sample t-test results for comparisons between the scores obtained and the hypothetical score in terms of the human skills

Group	t-value	Degree of freedom	Significance level	Mean difference	With a 95% confidence level	
					Upper level	Lower level
Human skills	-2.963	86	0.015	-18.75	-39.12	-15.71

As it is observed in the above table, the amount of t-value obtained for the comparisons between the mean scores obtained and the expected means is equal to -2.963 and this t-value is found statistically significant in 95% level. In other words, it can be stated with 95% confidence that principals in gifted students school are significantly in need of human skills.

**Question Three: what are the needs of the principals in gifted-student schools in terms of the technical skills?**

According to the study sample volume's mean and level difference of one-sample t-test from the hypothetical value, 4, the mean announced by the principals in gifted-student schools in terms of the technical skills indicators is significantly lower than the hypothetical mean, 4, in variables like the enjoyment of the supervisory skills for managing the school programs and projects, the ability to design and implement new educational and cultural programs (according to the students' age conditions), the ability to establish quality management systems in schools, the enjoyment of supervisory skills for controlling the staff and teachers' performance, the ability to attract and retain specialist human workforce. So, it can be concluded that the principals' technical skills indicators in gifted-student schools are reflective of low scores in a 95% confidence level regarding the aforementioned components. Moreover, the rest of the variables pertaining to the technical skills are in a position close to an optimum level and some are even in situations better than optimum. To supplement the analyses pertaining to this question, the following table presents the one-sample t-test results.

Table 3: one-sample t-test results for the comparisons between the mean scores obtained and the hypothetical score in terms of the technical skills

Group	t-value	Degree of freedom	Significance level	Mean difference	With a 95% confidence level	
					Upper level	Lower level
Technical skills	-1.412	86	0.410	-4.75	-26.12	-12.71

As it is observed in the above table, the amount of t-value obtained for the comparisons between the mean scores obtained and the expected mean is -1.412 and this value is not found statistically significant in a 95% confidence level. In other words, it can be stated with 95% confidence level that the principals in gifted student schools are not in need of technical needs in a significant manner.

**Question Four: what are the principals' priorities in gifted students' schools in terms of the perceptual, human and technical skills?**

Friedman's ranking test was applied to prioritize principals' needs in terms of perceptual, human and technical skills in gifted-student schools. The results are tabulated in the following table.

Table 4: the results of the gifted-student schools' principals in terms of the perceptual, human and technical skills

Variable	Rank mean	Conclusion (rank)
Perceptual skills	2.24	1
Human skills	2.06	2
Technical skills	1.71	3
Chi-square root	31.588	
Degree of freedom	2	
Significance level	0.000	

The results of Friedman test indicate that there is a significant difference ( $P < 0.01$ ), in regard of priorities, between the principals' needs in gifted students' schools in terms of perceptual, human and technical skills in a manner that perceptual skills (with a rank mean=2.24) are rated first followed next by human skills (with a average rank=2.06) and technical skills (with a average rank=1.71) take the third priority.

## DISCUSSION AND CONCLUSION

Training and improving the human resources is considered as a strategy for obtaining human capitals and providing for positive consistency with the changes in the conditions, so its strategic stance and position manifests itself in the survival and development of the organization. It is evident that such an activity quite alike any other organizational activity entails correct and principled planning and need analysis is the first measure that should be taken in any programming activity. This way, need analysis is the first step that should be taken in staff's training programs and, in fact, it is the first factor safeguarding and leading to the effectiveness of the training and improving functions which will bring about a more objective foundation for programming and planning and its compliance with the organizational needs, job areas and employees' departments will become highly likely and, eventually, efficiency will be elevated (Jiyanpur et al, 2012).

Based on the study findings from the t-test tables, it was made clear that the principals' need announcement means in gifted student schools in terms of components of perceptual, technical and human skills are significantly lower according to the difference seen between the score obtained and the hypothetical value, 4, and this difference is statistically significant.

The results of the present study correspond to the results obtained by Hayat (2015), Kuhl et al (2014), Gholamreza'ee and Amjadiyan (2014), Orangi et al (2011), Sa'adatmand and Sina'efar (2009), Julien et al (2012), Earl (2012), Aysegul and Bilge (2010), Leighton et al (2007) Almani (2006) and Colt (2003).

Also, the results obtained in Friedman's test indicate that there is a significant difference between the principals' needs in gifted student schools in terms of perceptual skills indicators in such a manner that perceptual skills (with a average rank=2.24) is ranked first, human skills (with a average rank=2.06) comes second in rank and technical skills (with average rank=1.71) takes the last position.

According to the results obtained from the need analysis of the principals in gifted students' schools in terms of perceptual, human and technical skills, the study findings show that the principals in gifted students' schools are more needful regarding the perceptual and human needs but they enjoy a relatively optimum status considering the technical skills. To become effective and acquire job accomplishments and in order to play a highly accentuated role in regard of elevating the effectiveness and efficiency levels in gifted students' schools, the principals need to take part in in-service training courses so as to be able to enhance the productivity level.

Also, the principals should pay particular attention to topics regarding the perceptual skills indicators such as adopting appropriate organizational policies and strategies, the ability to transfer perspectives and thoughts to the addressees, the ability to recognize the capabilities and competencies of the staff and encouraging the employees to be innovative and creative, the ability to analyze the situations in a realistic manner by the teachers in gifted students' schools because the teachers were not found enjoying an optimum level in the abovementioned indicators. Furthermore, the principals should emphasize on the enjoyment of human skills qualifications such as the supervisory skills for the implementation of the programs and projects at schools, the ability to design and run training programs and new cultural plans (proportionately based on the students' age conditions), the ability to establish quality management systems at schools, the enjoyment of supervisory skills for controlling the staff and teachers' performance, the ability to attract and retain specialist human workforce because, as it was mentioned above, the teachers were not found in an optimum level in these components. In regard of the technical skills, the following indicators should be carefully taken into consideration: the enjoyment of the supervisory skills for implementing the school programs and projects, the ability to design and run training plans and new cultural programs (corresponding to the students' age conditions), the ability to establish quality management systems at schools, the enjoyment of supervisory skills for controlling the staff and teachers' performance, the ability to attract and retain specialist human workforce. And, finally, according to the results obtained from Friedman test, the higher ranks obtained by the teachers should be placed atop of the principals' priorities list of objectives and missions.

According to the study findings, the following suggestions are offered:

The present study should be implemented on a countrywide basis and then the necessary measures should be taken according to the comparisons and the obtained results.

Further research is recommended here in which the factors effective on the principals' performance is surveyed in other school grades.

Training classes and workshops should be held to update and advance the principals in terms of perceptual, technical and human skills.

Principals' performance should be precisely and continuously evaluated via various methods and feedbacks should be provided to them.

In-service training courses should be gradually and experimentally held and the interested and voluntary principals should be invited.

The principals and the individuals involved in education should be provided with the attitude that their experiences, creativities and innovations can solve many of the education problems and they should not be expected to exhibit cliché behaviors.

Educational centers' principals and managers should try to improve the overall performance in administrating and elevating the managers' perceptual, technical and human skills.

According to study results, it is recommended that in-service training courses be held for the principals having less experience in order for their perceptual, technical and human skills to be enhanced for administrating schools.

## REFERENCES

- Afshari, Mustafa; Honari, Habib and Ghafuri, Farzad, (2010), "the survey of the threefold managerial skills (perceptual, human and technical) in physical education offices' managers from the entire country's universities", *sport management*, 5(2):105-125
- Almani, A. (2006). Comparative Study of the Effects of In- Service Training on Motivational Techniques and Teacher Content Knowledge of Secondary School Teachers of Pakistan.
- Aysegul A, Bilge G. (2010). Determining in- service training Programs" characteristics given to teachers by conjoint analysis, Faculty of Education, Hacettepe University, Ankara, 06532, Turkey.
- Earl, L. M. (2012). *Assessment as learning: Using classroom assessment to maximize student learning*. Corwin Press.
- Farzaneh, Muhammad; Purkarimi, Javad and Nowruzi, Mitra, (2015), "offering a pattern of high school principals' professional qualifications", *seasonal journal of educational leadership and management*, 9(2):83-96
- Gholamreza'ee, Simin and Layla Amjadiyan, (2014), "second round of educational needs analysis for high school principals from District 2 of Kermanshah's division of education ministry and the priorities sorting based on Kats threefold skill", the second national conference on applied research in management and accounting
- Hayat, Ali Asghar, (2015), "designing and validating professional standards for Iran's high school principals and Shiraz's high school principals professional need analysis", PhD thesis, Ministry of Science, Research and Technology, management and accounting department, Kharazmi University
- Huusko, L. (2006). The lack of skills: an obstacle in teamwork. *Team Performance Management: An International Journal*, 12(1/2), 5-16.
- Jalilvand, M., A., Eje'ee, J., (1995), "personality characteristics of the gifted students from Brilliant and Cute Talent Centers and special high schools in the city of Tehran", the journal of brilliant talents, 4(1): 1-7
- Jiyanpur, Hamid; Zaynalipur, Hussein; Ahmadi, Reza, (2012), "Utilizing QFD in transforming in-service training clients' wants to educational necessities (case study: the central library organization of Astan-e-Ghods-e-Razavi)", *general management studies*, 5(15): 85-112
- Julien. B.L., Lexis. L., Schuijers. J., Samiric. T., McDonald. S. (2012). Using capstones to develop research skills and graduate capabilities: A case study from physiology.9, 3, 1-15.
- Kraft, M. A., Papay, J. P., Johnson, S. M., Charner-Laird, M., Ng, M., & Reinhorn, S. (2015). Educating Amid Uncertainty The Organizational Supports Teachers Need to Serve Students in High-Poverty, Urban Schools. *Educational Administration Quarterly*, 51(5), 753-790.
- Kuhi, Amir Hussein; Tabataba'ee, Sayyed Mahmud; Kuhi, Zahra and Fatemeh Ghendali, (2014), "the survey of the educational needs of the high school principals from the city of Tehran based on technical, human and perceptual skills", international conference on behavioral sciences and social studies
- Leighton, J. (2007). "An Experimental Test of Student Verbal Reports and Expert Teacher Evaluations as a Source of Validity Evidence for Test Development", *Student Report and Teacher Evaluations*, Volume 12, Issue 3, Pages 103-109.
- Lewin, K. (2015). *Educational access, equity, and development: planning to make rights realities* (Vol. 98). United Nations Educational, Scientific and Cultural Organisation.
- Montecinos, C., Walker, H., & Maldonado, F. (2015). School administrators and university practicum supervisors as boundary brokers for initial teacher education in Chile. *Teaching and Teacher Education*, 49, 1-10.

- Orangi, Abdulmajid; Gholtash, Abbas; Shahamat, Naderavi and Seliyani, Gholamali, (2011), "the survey of the effect of in-service training on the professional performance of the teachers from the city of Shiraz", seasonal journal of new approaches to education management", 2(5): 95-114
- Sa'adatmand, Zohreh and Sina'eefar, Ayyub, (2009), "in-service training courses' need analysis for Persian literature teachers from the perspective of the principals, specialists and secondary school teachers in Izeh County", seasonal journal of educational leadership and management, Islamic Azad University, Khorasgan Branch, 3(2): 107-124
- Torkman, Mahdi and Afshar, Mahdi, (2010), "the survey of the managers' strong points and the methods of improving managerial skills in active job-creating cooperative firms in the city of Hamadan", journal of cooperation, 21(2): 111-127