An application of knowledge management to document guided schools necessary information

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C H R O N I C L E	A B S T R A C T
	This paper presents an empirical investigation on how to document some experiments on special and governmental guidance schools managers of Abadan province in Iran. Statistical society of this research includes all education managers and teachers in governmental and nongovernmental guidance schools of Abadan province located in southern part of Iran. The study selects 222 teachers and managers, randomly, and using some questionnaires, we try to find important items to document. The questionnaire covers 6 main groups including students, teachers, school manager, connection with parents, connection with society, education planning. The study finds out whether there was any difference between teachers' educational background and six groups of people. However, the investigation does not find any difference between teachers' educational background and six groups of studies.

1. Introduction

One of the most important issues in most guided schools is to build a good knowledge management system so that when teachers, principals and other managers leave, new people could have the access to good information and could continue running the system, properly. There are many studies on how to establish knowledge management (KM) in different organizations (Berliner, 2004; Choo & Bontis, 2002; King & Marks Jr, 2008). Although there has been a great effort in the business world that information and KM could be necessary tools in organizations, it is only recently that educational administrators and teachers have begun to see at how they might apply information systems to help in creating effective learning environments. Petrides and Guiney (2002) performed a survey, picked up some examples from schools and explained how KM could enable schools to investigate the plethora of data they collected and how an ecological framework could be applied to transform these data into meaningful information.

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Bradley et al. (1999) investigated the relationship between environmental knowledge and environmental attitude of high school students. Park (2011) developed a knowledge management system for storing and implementing the design knowledge acquired in the process of a user-centered design of the next generation information appliances. Wiig (2002) investigated knowledge management in public administration. Karathanos and Karathanos (2005) applied the balanced scorecard to education.

2. The proposed study

The proposed study of this paper tries to first prioritize guided schools managers' documentations in terms of their different perspectives such as students, educational planning, teachers, management of schools, relationship with parents and relationship with society. The study also tried to determine appropriate techniques for documentation of the resources such as movies, slides, etc. In addition, the study determines the barriers on documentation of the plans and resources. The study selects 30 guided schools, 15 female and 15 male oriented ones, in province of Abadan, Iran out of 63 existing ones and distributes a questionnaire in Likert scale among 5-8 teachers and principals. In sum, there were 222 questionnaires filled and used for investigation. Table 1 demonstrates the summary of some basis statistics associated with the survey.

Table 1
The summary of some basic statistics

Variable	Number	Mean	Standard deviation	Min	Max
Students	222	4.33	0.57	2	5
Teachers	222	4.45	0.49	2.38	5
Educational planning	222	4.25	0.54	2.12	5
Managing the school	222	4.37	0.56	1.89	5
Relationship with parents	222	4.29	0.58	2.29	5
Relationship with society	222	4.15	0.68	1.67	5

As we can observe from the results of Table 1, the highest mean belongs to teachers (Mean = 4.45, Standard deviation = 0.49) and the minimum mean belongs to society (Mean = 4.15, Standard deviation = 0.68). Table 2 demonstrates some other statistics associated with the study for sub-component of students. As we can observe from the results of Table 2, the highest mean belongs to having friendship educational background (Mean = 4.67, Standard deviation = 0.63) and the minimum mean belongs to Creating some background for familiarizing students with culture (Mean = 4.17, Standard deviation = 0.84).

Table 2
The summary of some basic statistics associated with students

Variable	Number	Mean	Standard	Min	Max
Friendship educational environment	222	4.67	0.63	2	5
Appropriate methods of assessment	222	4.38	0.73	2	5
Sharing students in discussions	222	4.24	0.83	1	5
Using supplementary equipment in teaching	222	4.36	0.77	2	5
Improving formal and information communication between teachers and students	222	4.21	0.83	1	5
Creating some background for familiarizing students with culture	222	4.17	0.84	1	5
Counselling services	222	4.27	0.85	1	5
Mean	222	4.33	0.57	2	5

Table 3
The summary of some basic statistics associated with teachers

Sub-component	Number	Mean	Standard deviation	Min	Max
Educational backgrounds	222	4.65	0.69	1	5
Using recent advances of technology for teaching	222	4.48	0.75	1	5
The ability to teach and transfer information	222	4.51	0.75	2	5
The effects of teachers' hospitality in teaching courses	222	4.58	0.58	2	5
The ability to answer questions	222	4.28	0.8	2	5
Methods of communications	222	4.45	0.77	1	5
Performance measurement methods	222	4.28	0.83	1	5
Creating motivation among teacher for continuous	222	4.4	0.87	1	5
Mean	222	4.45	0.49	2.38	5

Similarly, Table 3 demonstrates the summary of some basic statistics associated with teachers. According to the results of Table 3, the highest mean belongs to educational background (Mean = 4.65, Standard deviation = 0.69) and the minimum mean belongs to effects of teachers ability to answer the questions (Mean = 4.28, Standard deviation = 0.8). Similarly, Table 4 presents the summary of some basic statistics associated with educational planning.

Table 4
The summary of some basic statistics associated with educational planning

Description	Number	Mean	Standard deviation	Min	Max
Setting up appropriate teaching programs	222	4.5	0.72	2	5
Using traditional methods for teaching materials	222	3.55	1.14	1	5
Using updated materials for teaching	222	4.25	0.92	1	5
Using technology of teaching	222	4.45	0.75	1	5
Appropriate teaching planning	222	4.21	0.81	2	5
Having appropriate time schedule for teaching materials	222	4.26	0.84	1	5
Planning appropriate resources	222	4.42	0.75	2	5
Building a good relationship between course materials and time	222	4.32	0.82	1	5
Mean	222	4.25	0.54	2.12	5

Based on the results of Table 4, the highest mean belongs to setting up appropriate teaching programs (Mean = 4.50, Standard deviation = 0.72) and the minimum mean belongs to Using traditional methods for teaching materials (Mean = 3.55, Standard deviation = 1.14). Next, we present the summary of some basic statistics associated with school management in Table 5.

Table 5
The summary of some basic statistics associated with school management

Description	Number	Mean	Standard	Min	Max
Methods and rules for brining school into good discipline	222	4.61	0.58	3	5
Methods for building friendly relationships with students	222	4.56	0.68	1	5
Having peaceful relationships among managers	222	4.65	0.63	1	5
Methods for attracting parents' attention for management of schools	222	4.3	0.85	1	5
Methods for absorbing required funding from parents	222	4.34	0.78	1	5
Methods for attracting teachers' attention for management of schools	222	4.37	0.82	1	5
Appropriate methods for hiring more teachers	222	4.11	0.93	1	5
Methods for giving different social services	222	4.09	0.94	1	5
Methods for budgeting schools	222	4.27	0.88	1	5
Mean	222	4.37	0.56	1.89	5

Based on the results of Table 5, the highest mean belongs to having peaceful relationships among managers (Mean = 4.65, Standard deviation = 0.63) and the minimum mean belongs to Methods for giving different social services (Mean = 4.09, Standard deviation = 0.94). Next, we present the summary of some basic statistics associated with relationship with parents in Table 6. As we can observe from the results of Table 6, the highest mean belongs to methods for familiarizing parents

with rules (Mean = 4.41, Standard deviation = 0.76) and the minimum mean belongs to having parents' involvement in teaching courses (Mean = 3.96, Standard deviation = 0.99). Table 7 demonstrates some other statistics associated with the study for sub-component of relationship with society.

Table 6
The summary of some basic statistics associated with parents

Description	Number	Mean	Standard	Min	Max
Methods for familiarizing parents with rules	222	4.41	0.76	1	5
Methods for familiarizing parents with teaching materials	222	4.24	0.83	1	5
Methods for familiarizing parents with students' behaviors	222	4.5	0.71	2	5
Methods for familiarizing parents with problems associated with students	222	4.5	0.7	2	5
Building society	222	4.38	0.71	2	5
Having parents' involvement in teaching courses	222	3.96	0.99	1	5
Having parents' involvement in training students	222	4.05	0.9	1	5
Mean	222	4.29	0.58	2.29	5

Table 7
The summary of some basic statistics associated with relationship with society

Description	Number	Mean	Standard deviation	Min	Max
More communication of schools with other scientific	222	4.44	0.81	1	5
More communication with entertainment services	222	4.18	0.72	2	5
More communication with industry	222	3.84	0.96	1	5
More communication with universities	222	3.9	1.06	1	5
More communication with counseling agencies	222	4.18	0.9	1	5
How to evaluate university with other environments	222	3.89	1.03	1	5
Mean	222	4.15	0.68	1.67	5

As we can observe from the results of Table 7, the highest mean belongs to More communication of schools with other scientific (Mean = 4.44, Standard deviation = 0.81) and the minimum mean belongs to more communication with industry (Mean = 3.9, Standard deviation = 1.06).

3. The results

In this section, we present details of our findings on relationship between different teachers' personal characteristics and students' performances.

3.1. The relationship between students and teachers' educational backgrounds

The first question of the survey investigates the relationship between students' educational backgrounds and students' performance. Table 8 shows details of our t-student test.

Table 8
The results of t-student test on testing between students and teachers' educational background

Main	Years of	Number	Mean	Standard	Standard	df	t-value	Sig.
Students	12-14	61	4.33	0.62	0.07	220	0.025	0.98
	16-18	161	4.33	0.55	0.04			

As we can observe from the results of Table 8, there is not any meaningful difference between two groups of teachers, the highly educated and the educated ones.

3.2. The relationship between teachers and teachers' educational backgrounds

The second question of the survey investigates the relationship between students' educational backgrounds and teachers' performances. Table 9 shows details of our t-student test. As we can observe from the results of Table 9, there is not any meaningful difference between two groups of teachers, the highly educated and the educated ones.

Table 9
The results of t-student test on testing between teachers and teachers' educational background

Main	Years of	Number	Mean	Standard	Standard	df	t-value	Sig.
Students	12-14	61	4.47	0.48	0.06	220	0.225	0.799
	16-18	161	4.45	0.50	0.03			

3.3. The relationship between educational planning and teachers' educational backgrounds

The third question of the survey investigates the relationship between students' educational backgrounds and educational planning. Table 10 shows details of our t-student test.

Table 10
The results of t-student test on testing between educational planning and teachers' educational background

Main	Years of	Number	Mean	Standard	Standard	df	t-value	Sig.
Students	12-14	61	4.36	0.45	0.05	220	1.90	0.058
	16-18	161	4.20	0.57	0.04			

As we can observe from the results of Table 10, there is not any meaningful difference between educational planning and teachers' educational background.

3.4. The relationship between management of school and teachers' educational backgrounds

The fourth question of the survey investigates the relationship between students' educational backgrounds and management of schools. Table 11 shows details of our t-student test.

Table 11
The results of t-student test on testing between management of schools and teachers' educational background

Main	Years of	Number	Mean	Standard	Standard	df	t-value	Sig.
Students	12-14	61	4.43	0.55	0.07	220	0.313	0.085
	16-18	161	4.34	0.56	0.04			

As we can observe from the results of Table 11, there is not any meaningful difference between management of schools and teachers' educational background.

3.5. The relationship between communication with parents and teachers' educational backgrounds

The fifth question of the survey investigates the relationship between students' educational backgrounds and communication with parents. Table 12 shows details of our t-student test.

Table 12
The results of t-student test on testing between communication with parents and teachers' educational background

Main	Years of	Number	Mean	Standard	Standard	df	t-value	Sig.
Students	12-14	61	4.35	0.57	0.07	220	0.357	0.081
	16-18	161	4.27	0.59	0.04			

As we can observe from the results of Table 12, there is not any meaningful difference between communication with parents and teachers' educational background.

3.6. The relationship between relationship with society and teachers' educational backgrounds

The sixth question of the survey investigates the relationship between students' educational backgrounds and relationship with society. Table 13 shows details of our t-student test.

Table 13

The results of t-student test on testing between society and teachers' educational background

Main	Years of	Number	Mean	Standard	Standard	df	t-value	Sig.
Students	12-14	61	4.25	0.71	0.09	220	0.179	0.138
	16-18	161	4.11	0.67	0.05			

As we can observe from the results of Table 13, there is not any meaningful difference between society and teachers' educational background.

4. Conclusion

In this paper, we have presented an empirical investigation to classify different groups of issues, which could be documented in educational systems of guided schools. In terms of all basic requirements, the study has suggested documenting teachers' information especially their educational background as well as years of job experiences. In terms of students' affairs, the relationship with teachers has been accounted as the most important issue. The study has also tried to find out whether there was any difference between teachers' educational background and six groups of people and our investigation did not find any difference between teachers' educational background and six groups of studies.

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