

The Competency Levels of Education Supervisors' in Knowledge Management

By

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Abstract

In our age, knowledge management has been seen as one of the most crucial development tools in the organizations for meeting the goals in the most effective way. This issue bares utmost importance especially for the educational organizations which themselves depend on the knowledge. This research is a survey type descriptive study realized for the aim of determining knowledge management competency levels of the province education supervisors. The study group comprised the supervisors who worked in the cities of Diyarbakır, Elazığ, Kahramanmaraş, Siirt, Batman and Şanlıurfa in Turkey. The views of supervisors related to knowledge management competencies were received by a questionnaire through electronic media. As total, 163 supervisors replied the questionnaire items. The responses were analyzed through parametric and non parametric tests considering age and work experience variables. Obtained findings revealed that the views of the respondents significantly differed according to the dependent variables. The oldest and the most experienced groups did not assume themselves so competent as the other groups in some of the knowledge management dimensions. Some recommendations made concomitant with the obtained results.

Keywords: *Education, Supervisor, Knowledge Management, Competence*

1. Introduction

Due to their nature, education organizations are known to be continuously occupied with knowledge. As change and progress become a constant fact in the 21st century, it is essential for education organizations to enhance knowledge management competencies of the staff for ensuring effective education. To achieve such a goal, the structure and sub structures of educational organizations must work in collaboration to successfully utilize knowledge management and become a learning community. However, problems stemmed from existing policies and practices hinder the realization of expectations in education supervision. Many studies show that administrators who are also responsible from supervision are not so able to effectively implement knowledge management in education supervision (Kılıç, 2007; Çetin, 2002; Çınar, 2004; Dağlı & Uzunboylu, 2005).

Based on the views of supervisors, the general purpose of this study is to determine the competency levels of supervisors in knowledge management process (holding, sharing, using, storing and generating knowledge), and to develop suggestions for achieving more effective knowledge management. In the frame of this aim, the following questions need to be investigated:

1. Do the supervisors' competencies in holding, sharing, using, storing and generating knowledge differ according to age variable?
2. Do the supervisors' competencies in holding, sharing, using, storing and generating knowledge differ according to the variable of supervisory experience?
3. Which suggestions can be put forward to optimize education supervisors' competency in knowledge management?

This paper then seeks to add to our understanding of knowledge management by exploring the role that age and expertise play in knowledge management. In this study, education supervisors' knowledge management skills which based on intellectual capital of organization to perform their missions are discussed. In other words, the competency of supervisors in sharing, using, storing and generating of knowledge which they obtained from developed or accumulated experience, services and products depending on their age and experience are emphasized.

2. Literature Review

The Importance of Supervision

Organizations should always be aware and follow the progress of their intended goals. Thus, a supervisory system is vital for the continued existence of an organization (Aydın, 2000). Through supervision, the impact and efficiency of education increases, and the structure can monitors itself. While the suitability of the current functioning to the regulations is controlled the compliance of the educational system to the requirements of the age is increased, as well (Yıldırım, 2006). According to Bursalıoğlu (2002), supervision, as the first condition of achieving harmony in the organization, is the most frequently used regulatory mechanism and behavior control process for the sake of common good. Therefore, supervision encompasses diagnosing, assessment and correction-improvement activities (p.25). Olivia & Pawles (2001), related to the concept of educational supervision state that educational supervision suggests responsibilities encompassing many aspects of schooling, including administration, curriculum, and instruction (p.12). They also add that in the inclusion of instructional, curricular, and staff development domains, the supervisors exercise various roles. The supervisors assist teachers in the improvement of instruction, curriculum planning and improvement, and personal and professional growth and development (p.23).

In a similar vein, Aydın (2000) concludes that supervision removes any coincidental ties to finding and correcting errors, determining and complementing deficiencies, pinpointing problems and instituting solutions, finding and resolving necessities, therefore providing a systematic and planned result (p.11). It is noted that a certain amount of competency is required for supervision to have an effective role and also to understand and interpret the purpose of education.

The concept of competency pertains to the capacity needed to complete a duty or position in a satisfactory manner (Şahin, 2004:58). In other words, competency refers to an individual's ability to complete their duties in an acceptable fashion (Sezgin, 2006:3-4). On the other hand, Williams (1998) defines competency as functioning successfully in a certain job, having the sufficient technical knowledge and skill as well as behavioral aptitude. The responsibility falls upon the supervisory system, and therefore the supervisors who operate within the system, to cultivate and make the school teachers and principals who have a pivotal function in the education system effective. Within the education structure, a large amount of competency is required for a supervisor to carry out successfully such a heavy responsibility (Demir, 2000).

Knowledge Management

Knowledge is widely viewed as the critical resource for all organizations (Muhammed, Doll & Deng, 2011). It exists in tacit and explicit forms, which are complementary and symbiotic. Innovation can occur only when explicit and tacit knowledge interact. While people can understand information individually and in isolation, knowledge can be only understood in a context of interactivity and communication with others (Khalil & Shea, 2012).

Knowledge Management (KM) seeks to capture that knowledge for the organisation's future benefit, disseminate the knowledge and use it to create further knowledge. The history of knowledge management is complex and can be traced to the interface of several disciplinary knowledge streams (Barratt-Pugh, Kennett & Bahn, 2013).

Knowledge management has been interpreted and conceptualized at many levels. The most prominent treatment in the literature on knowledge management has viewed it as an organizational initiative or as an organizational system. This paradigm views knowledge as an organizational resource that has to be managed well in order to gain organizational competence (Muhammed, Doll & Deng, 2009). Knowledge management is usually adopted by large organizations because they have a wide range of knowledge available. Large organizations have sufficient resources and capabilities for KM adoption. They have the technical competence and social processes necessary for the effectiveness of a KM system (Supyuenyong & Swierczek, 2011). Knowledge management has been shown to significantly enhance the performance of organizations (Yoon, 2012).

Knowledge management can be defined in many ways. Jennex (2005) defines KM as the practice of selectively applying knowledge from previous experiences of decision making to current and future decision making activities with the express purpose of improving the organization's effectiveness (Chantarasombat, Srisa-ard, Kuofie & Jennex, 2010). Knowledge management is defined by Raja (2008), quoted from Bahatt (2002), as simplifying knowledge related activities such as creating, holding, conveying and use of knowledge. This definition correlates with holding, accumulating, protecting, updating, creating, sharing, and using knowledge when necessary (p. 54). In a short way, knowledge management defines to give a central position to knowledge in all the work and organizational processes (Quintas, 2001:14).

To reach the most positive results in knowledge management, as quoted from White (2002) by Muratoğlu & Özmen (2006), engaging to sustainable competitiveness, knowledge management deals with holding, using, sharing, storing, and generating knowledge resources through the best possible ways by ensuring trustworthiness especially in collaboration with the intellectual capital assets (p.8).

Holding knowledge

Holding knowledge is the most fundamental component and the starting point of knowledge management. It encompasses internal and external observation, examination and transfer of the knowledge on near or far environmental changes. Holding knowledge facilitates learning at a superior level, implementing successful strategies, and advancement in production and technology for organizations (Akgün & Keskin, 2003). Torraco (2000) suggests knowledge management accompanies the coding of personal knowledge and distribution of it throughout the organization via an organizational data base (p.39). An important resource for attaining knowledge for organizations is to recruit individuals with an advanced level of knowledge. Organizations ensure new knowledge is transferred through a new member or members. In some instances new knowledge is acquired through purchasing another organization, but this is considered to be a very radical step (Huber, 1991:96-97).

Sharing knowledge

Knowledge sharing is recognized as an important facilitator of organizational performance today (Endres & Chowdhury, 2013) and as an important element of knowledge management includes sharing information, ideas, suggestions, and expertise among people in an organization (Nikabadi & Zamanloo, 2012). Sharing this body of knowledge improves the ability of knowledge workers to further innovate (Chantarasombat, Srisa-ard, Kuofie & Jennex, 2010).

Knowledge societies are organizational societies and their primary objective is to integrate knowledge with a task and supply the necessary circulation. According to a study conducted by the New York Times in 1996, only 20% of workers collaborated with their colleges and, instead of giving their superiors the necessary solutions, they just told them what they wanted to hear (Muratoğlu & Özmen, 2006:7).

For the organization to use knowledge collected from internal and external sources effectively and for the knowledge to be attainable, knowledge must be transferred to the main database as well as shared by

individuals for making use it promptly. As knowledge is dynamic, it grows and becomes more effective as it is shared (Tiwana, 2000:199).

Using knowledge

Holding and sharing knowledge is important; however, knowledge is there to be used and to solve problems. For it to be used properly, it must be understood and internalized properly by the user (Yazıcı, 2001). As knowledge is developed and renewed constantly in our age, to strengthen and develop knowledge assets, knowledge should be used promptly. Knowledge is as functional as how effectually it is used and understood. When new knowledge combines with already existing knowledge, then it becomes greater than its original components (Aktan & Vural, 2005; Kılıç, 2007).

Storing knowledge

Organizations store knowledge in order to re-use it or use it again in knowledge regeneration. In organizations, knowledge collected through manufactured goods or services production is stored in knowledge archives or on the “knowledge super highway”, the internet (Yazıcı, 2001). The experiences of the individuals or knowledge on the occurrence in the organizations are usually stored within the individuals and this knowledge is hard to reach. For that reason this kind of knowledge is defined as “tacit knowledge” and it is of utmost importance to make it explicit. Another dimension of organizational memory is intellectual capital which is defined as the intellectual capacity of an organization to successfully compete in the marketplace, as well as the organization’s competence in satisfying social demands and interrelations with their target market (Brinker, 2000).

The most fundamental goal of knowledge management is for organizations to store knowledge through different techniques and make it readily available and accessible. This goal emphasizes the fact that accumulated data is vital for an organization in knowledge generation and optimizing its value. Thus, organizations must store the acquired knowledge to be used again when needed (Aktan & Vural, 2005; Martensson, 2000).

Generating knowledge

New knowledge is generated through the mutual interaction and synergy (socialization, recognition/comprehension, integration and vocalization) between tacit and explicit knowledge. It is important for tacit knowledge to be explicit for generating knowledge (Balasubramanian et al., 1999:146).

Supervisors' being aware of the basic components of knowledge helps in recognizing the methodology amongst components of knowledge, and simplifies making analysis and synthesis. Knowledge can be generated through social, collective and individual cognitive processes. It can also be acquired through four configurations: socialization, externalization, internalization and integration. These configurations are related correspondingly with knowledge sharing, converting tacit knowledge into explicit one, and vice versa, integration, classification and synthesis processes (Alavi & Leidner, 2001:116).

The Knowledge Management in Supervision Process

The environment of the organization is always changing which requires accurate and update supervision. Also, supervision is one of the main bases of management. Thus, in order to enhance effectiveness and efficiency of supervision, transformation from traditional view to the modern one is necessary. It seems that applying knowledge management in supervision can improve the process of supervision and can help to accomplish this basis of management in the competitive arena of today (Davali & Ansari, 2012).

The organizations must be aware that they need the skill of knowledge leadership for becoming innovative. Since knowledge or knowledge management ability are the main factors for progressing and the main resources of educational organizations, the effective performance of these organizations depend upon the accurate and effective producing of knowledge. Especially education industry is increasingly

becoming a knowledge-based community that depends critically on knowledge management activities to improve the quality of supervising education.

Supervision process involves several complex and knowledge-intensive practices that highly depend on supervisors' know-how and experience. Thus, whether supervisor can utilize and manage their knowledge in supervisor's process effectively is vital to the quality of supervision (Yew, Ahmad & Jaafar, 2011).

In essence, supervisor's role size and complexity is undergoing changes, due to the increasing competitiveness faced by most organizations in their internal and external environments. Supervisors are required to productively manage the business and continuously be looking for opportunities for quality improvement (Bunning, 1996). Historically, supervisors have obtained their position through their technical expertise and experience, thus most supervisors do not possess management qualifications. Unfortunately, the aforementioned changing context for the supervisor requires a more demanding skill set for the supervisor's role. This must result in a mismatch between the requirements of the supervisor role and the capability of supervisors in organizations (MacNeil, 2004). On the other hand, success and improvement in every system are realized by effective and efficient supervision which is exerted in various stages which, in turn, doubles the importance of applying knowledge management in the supervision process (Davali & Ansari, 2012).

3. Methodology

Research model

A descriptive survey method was used in the study. A survey is any activity that collects information in an organized and methodical manner about characteristics of interest from some or all units of a population using well-defined concepts, methods and procedures, and compiles such information into a useful summary form. A survey can be thought to consist of several interconnected steps which include: defining the objectives, selecting a survey frame, determining the sample design, designing the questionnaire, collecting and processing the data, analysing and disseminating the data and documenting the survey (Statistics Canada, 2003).

Study Group

The study group was comprised of education supervisors studying at Firat University Social Sciences Institute's graduate program during the 2008-2009 academic year and supervisor coworkers in their place of work. Thus, a study group of 163 individuals was achieved including supervisors from the provinces of Diyarbakır, Elazığ, Kahramanmaraş, Siirt, Batman and Şanlıurfa, gathering their opinions through electronic mail (Table 1).

Instrument and Data Analysis

To acquire the views of province education supervisors on their own competencies in knowledge management, Muratoğlu's (2005) survey entitled "Strategies of Knowledge Management in Education Organizations" was utilized. Also the researchers used, with the author consent, three questionnaire items from Çınar's (2004) survey "Education Administrators Proficiency on Knowledge Management: Malatya Sample". To determine the reliability of the instrument, in other words, to understand the internal consistency of the scale, a reliability calculation was made and the reliability coefficient was found as $\text{Alpha}=.94$.

To determine the internal consistency of the scale used by the researchers, the Cronbach-Alpha coefficient was also calculated according to its sub dimensions that are *Holding knowledge* (including the items such as "I am in collaboration with my colleagues in holding the knowledge necessary for my work", "I utilize the community resources by having a good rapport with my work environment", "I find personal knowledge significant enough to use in my supervisory position", etc.), *Sharing knowledge*

Table 1. Number of Supervisors in the Study Group /Sent and Returned Questionnaires

Working Group	Number of Supervisors in the Study Group* / Sent Questionnaires	Number of Return Questionnaire
Diyarbakır	55	52
Kahramanmaraş	58	30
Elazığ	35	35
Batman	26	16
Siirt	10	10
Şanlıurfa	47	20
Total	231	163

* MEB. (2009). Between Provinces Replacement Guide of Supervisors.

(including the items such as “I convince the teachers and administrators about the importance of sharing knowledge”, “I share the necessity knowledge effectively to improve the performance of employees”, “I announce the knowledge that I ensure accuracy of to my colleagues”, etc.), *Using knowledge* (including the items such as “I help the provision of an environment of confidence to provide using knowledge effectively”, “I do my work as knowledge based”, “I try to implement new methods and approaches in supervision process”, etc.), *Storing knowledge* (including the items such as “I have knowledge bank in certain areas (laws, regulations and methods, etc.)”, “As I sort the knowledge that I have, I get ready it to be used all the time”, “I encourage the school management for create maps of knowledge”, etc.) and *Generating knowledge* (including the items such as “I help to be done research and analysis constantly to reach better in supervision”, “I encourage bring project based training into the forefront in school”, “I plan be aware of global change”, etc.). The results of that computing are given below (Table 2).

To evaluate the subjects' level of agreement to the items in the survey, towards the competency level of supervisors on knowledge management, the researchers have determined 5 scales as “Always”, “Generally”, “Sometimes”, “Rarely” and “Never”, so as to be scored as 5,4,3,2,1 correspondingly, for the items which have positive connotations; and 1, 2, 3, 4, 5 for the ones conveying negative connotations.

Table 2. Dimensions of Knowledge Management and Cronbach-Alfa Coefficients

<i>Dimensions</i>	<i>Items About Dimension</i>	<i>Cronbach-Alfa Coefficients</i>
Holding knowledge	1-8	.76
Sharing knowledge	9-13	.83
Using knowledge	14-26	.77
Storing knowledge	27-33	.64
Generating knowledge	34-44	.91

The subjects' responses to the questionnaire items were evaluated according to the arithmetic means indicating the agreement level as $X \leq 1.79$ Never; $1.80 \leq X \leq 2.59$ Rarely; $2.60 \leq X \leq 3.39$ Sometimes; $3.40 \leq X \leq 4.19$ Generally; and $X \geq 4.20$ Always.

In the analysis of the data, since in female's group of gender variable only 3 supervision replied to the survey, this variable wasn't included in the analysis. Considering the age variable, three categories were determined in the questionnaire form such as “30 years old and less”, “31-40 years old”, “41 years old and more”. However, since only 4 education supervisors are at the age 30 and less than it, combining “30

and less” and “31-40”, two groups were formed as “40 years old and less” and “41 years old and more”. Therefore, independent Samples t-test was computed for the analysis of data for the age variable. For the supervisory period variable, as the sublevel distributions were not homogeneous, the Kruskal-Wallis H Test was used. When a significant difference was found amongst the subject groups, to determine which of the groups the difference originated, a Mann Whitney U Test was preformed in a dual combinations.

4. Findings

Considering the age and work related spent time amount variables, the findings related to education supervisors’ knowledge management competency levels are given below.

The distribution of the supervisors by age in the study group, showed that 54.6% of the supervisors took place in the age group of “40 years old and less”, and 45.4% was among “41 years old and more” age group. According to time spent of work in this field we found 50.9% of the study group to be “5 years and less”; 11% “between 6-10 years”; 11.7% “between 11-15 years”; 16.6% “between 16-20 years”; and 9.8% “21 years or more” (Table 3).

Table 3. Demographic Qualifications of Supervisors Participated in the Research

<i>Demographic qualifications</i>	Groups	N	%
<i>Gender</i>	Female	3	1.8
	Male	160	98.2
	Total	163	100
<i>Age</i>	40 years old and less	89	54.6
	41 years old and more	74	45.4
	Total	163	100
<i>Supervisory experience</i>	5 years and less	83	50.9
	6-10 years	18	11
	11-15 years	19	11.7
	16-20 years	27	16.6
	21 years or more	16	9.8
	Total	163	100

Findings according to age variable

According to age variable it is understood that the replies of the supervisor groups as "40 years old and less" and "41 years old and more" indicated “generally” levels considering knowledge holding, using, storing and generating dimensions. However, related to “knowledge sharing” dimension, we found that the responses of "40 years old and less” group reflected “always”; however, the responses of “41 years old and more” group’s reflected “generally” level. The groups’ answers to the dimensions “holding knowledge” and “sharing knowledge” showed significant differences (Table 4) and the views of “40 years and less” age group indicated significantly more agreement than the “41 years old and more” group’s towards the competency levels of supervisors (P=.00). This result has shown that older education supervisors consider themselves to be less competent, especially at holding and sharing knowledge in their supervisory position.

Table 4. Data Distribution Based on the Dimensions According to Age Variable

<i>Dimensions</i>	Groups	N	\bar{X}	SD	SH	t	P
<i>Holding Knowledge</i>	40 years old and less	89	3.79	.40	.04	3.16	.00**
	41 years old and more	74	3.55	.58	.07		
	Total	163					
<i>Sharing Knowledge</i>	40 years old and less	89	4.31	.45	.05	2.07	.04*
	41 years old and more	74	4.13	.67	.08		
	Total	163					
<i>Using Knowledge</i>	40 years old and less	89	3.58	.29	.03	1.13	.26
	41 years old and more	74	3.50	.53	.06		
	Total	163					
<i>Storing Knowledge</i>	40 years old and less	89	3.66	.51	.05	-1.20	.23
	41 years old and more	74	3.76	.55	.06		
	Total	163					
<i>Generating Knowledge</i>	40 years old and less	89	4.14	.56	.06	1.00	.32
	41 years old and more	74	4.05	.60	.07		
	Total	163					

*P<.05, **P<.01

Findings according to the supervisory experience variable

When viewed according to the supervisory experience variable at the base of dimensions, we found significant differences in “holding knowledge” and “sharing knowledge” dimensions. To identify which subject groups were forming these discrepancies, the Mann Whitney U Test was applied to the subjects in duel groups. And, the arithmetic mean in the table was given not to determine the discrepancies but to verify the level of participation (Table 5).

The group of supervisors with “6-10 years” experience in their field was found to have the highest mean rank in holding knowledge compared to the other groups. The group who had “21 years or more” work experience held knowledge “sometimes”, and all of the other groups held knowledge “generally”. The mean rank of the group with “21 years or more” work experience was found to be significantly lower than all other groups. This group significantly differentiated from all the other groups except for the “16-20 years” work experience group. The mean rank of the group with “11-15 years” work experience was lower than the “6-10 years” work experience group. However this difference was not found to be significant. In other words, it could be construed that supervisors working for longer were less apt at holding knowledge than supervisors with “6-10 years” work experience. It was also found that the “5 years and less” work experience group was found to be less competent at holding knowledge than “6-10 years” group. And, this finding did not reflect any significant difference also.

With regard to the “sharing knowledge” dimension, the groups who had “5 years or less”, “6-10 years” and “11-15 years” work experiences reflected their views with “always”. But, the groups of “16-20 years” and “21 years or more” work experiences answered “generally”. The group with “6-10 years” supervisory experience scored the highest mean rank in knowledge sharing amongst all the groups and significantly differ from the “16-20 years” experience group. In this dimension, the “21 years or more” work experience group scored the lowest amongst all the groups and had a significant differentiation with the “5 years and less” and “6-10 years” work experience groups.

The results related to “using knowledge” dimension showed similarities to sharing knowledge dimension. The groups “5 years or less”, “6-10 years”, “11-15 years” and “16-20 years” work experience answered the dimensions with “generally”, but, the “21 years or more” work experience group answered “sometimes” regarding the use of knowledge. The group with “11-15 years” supervisory experience scored the highest mean rank in using knowledge where the “21 years or more” work experience group scored the lowest, however this finding was not considered significant. With “storing knowledge”, the answers did not indicate any significant differences and all groups reflected their views answering with “generally”.

The responses to the dimension “generating knowledge” did not differ significantly in the groups. However, the groups “5 years or less”, “16-20 years” and “21 years or more” work experience answered with “generally” where the other groups answered “always”.

The findings indicated that supervisors with work experience of “21 years and more” viewed themselves “sometimes” competent for holding and using knowledge and “generally” competent for the other dimensions. This implied that supervisors with so long years of work experience were not effective enough at knowledge management during the supervisory process.

Table 5. Data Distribution According to Supervisory Experience Related to Age Variable

<i>Dimensions</i>	Groups	N	Mean Rank	\bar{X}	X^2	P	Significant Difference (Mann Whitney U)
<i>Holding knowledge</i>	A) 5 years and less	83	86.09	3.76	15.53	.00**	E (A,B,C,)
	B) 6-10 years	18	99.11	3.85			
	C) 11-15 years	19	92.03	3.82			
	D) 16-20 years	27	73.87	3.55			
	E) 21 years or more	16	43.34	3.14			
	Total	163		3.68			
<i>Sharing knowledge</i>	A) 5 years and less	83	85.08	4.29	9.89	.04*	B (D) E (A,B)
	B) 6-10 years	18	104.36	4.49			
	C) 11-15 years	19	80.87	4.23			
	D) 16-20 years	27	73.04	4.01			
	E) 21 years or more	16	57.34	3.99			
	Total	163		4.23			
<i>Using knowledge</i>	A) 5 years and less	83	80.14	3.56	6.95	.14	
	B) 6-10 years	18	91.75	3.64			
	C) 11-15 years	19	103.11	3.73			
	D) 16-20 years	27	75.43	3.44			
	E) 21 years or more	16	66.69	3.35			
	Total	163		3.55			
<i>Storing knowledge</i>	A) 5 years and less	83	71.95	3.61	9.26	.06	
	B) 6-10 years	18	92.72	3.81			
	C) 11-15 years	19	101.53	3.91			

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	D) 16-20 years	27	92.09	3.76		
	E) 21 years or more	16	81.88	3.76		
	Total	163		3.70		
	A) 5 years and less	83	80.70	4.09		
	B) 6-10 years	18	101.17	4.35		
<i>Generating knowledge</i>	C) 11-15 years	19	91.71	4.23	7.28	.12
	D) 16-20 years	27	79.13	4.04		
	E) 21 years or more	16	60.50	3.89		
	Total	163		4.11		

*P<.05, **P<.00

5. Results, Discussion and Implications

In this study, according to the variables of age and supervisory experience, the obtained findings towards the determined dimensions can reveal the results below:

According to the age variable, the knowledge management dimensions as holding, sharing, using, storing and generating knowledge are realized at “generally” level by the group of “41 years old and more”. The group of “40 years old and below” are “generally” competent at the dimensions of holding, using, storing and generating knowledge and for the sharing knowledge dimension their competency level indicates “always”. The “40 years old and less” group scored considerably higher in holding and sharing knowledge, which is significantly differ from the “41 years old and more” group.

According to the work experience variable, the group with “21 years or more” experience is competent at “sometimes” level on holding and using knowledge. Towards the other dimensions as sharing, storing and generating knowledge, the findings reveal that they are “generally” competent.

The “21 years or more” work experience group finds itself “sometimes” competent at holding knowledge. With regards to the age variable, we find also the age group of “41 years old and over” are less competent at holding knowledge compared to their younger colleagues. Thus, we see that these results support each other.

With the sharing knowledge dimension, according to the age and work experience variables, all group views indicate “generally” and “always” levels. However the age group of “41 years old and more” finds themselves less competent than the age group of “40 years old and less” in sharing knowledge. The same is true for the work experience groups, where the “21 years or more” and “16-20 years” work experience groups find themselves less competent in sharing knowledge compared to the other groups. As all subject groups scored “generally” and “always” on sharing knowledge, this shows how important this knowledge management dimensions is to the supervisors.

According to the work experience dimension, the findings reveal that all the groups except “21 years and more”, consider themselves to be “highly” competent in using knowledge, however the “21 years and more” group considers itself “moderately” competent. This finding may be interpreted as supervisors with more work experience believe in to be less competent at using knowledge in the supervisory field. The same situation arises in the age variable where “41 years old and more” group does not find itself as proficient as their younger colleagues.

Related to the storing knowledge dimension, all the groups within the age and work experience variables, consider themselves to be “generally” competent.

The dimension of generating knowledge has been realized at “generally” and “always” levels by all the subject groups. Even if this conclusion collude with the results obtained towards sharing and using knowledge dimensions especially for older or more experienced subject groups’ views, we can conclude that supervisors are generally open to new opinions and they support generating knowledge in finding new application methods and generating new policies for supervision to be more effective.

When we look at some of the researches done by various scholars to determine the knowledge management competencies of school administrators’ and national education supervisors’, the relevant results may be cited as follows: Kılıç (2007) concluded national education administrators were more proficient at holding, sharing, using and storing knowledge than school principals and education supervisors; and, national education administrator aged between 25-29 had a lower proficiency in using knowledge compared to other administrators in different age groups. Dağlı & Uzunboylu (2005) found school administrator need to be educated in holding, sharing, using and storing knowledge to become proficient in the recent developments in knowledge management. Also Çınar (2004) concluded that national education administrators considered themselves to be “highly proficient” in generating and storing knowledge; “very highly proficient” in sharing knowledge; however “moderately proficient” in using knowledge. However education supervisors found national education administrators to be “moderately proficient” in generating and sharing knowledge and “less proficient” in using and storing knowledge. Çetin (2002) found school administrators were not well-informed on the knowledge management process, did not give due importance to sharing knowledge acquired from students and parents with the teachers, were not contributing to the conception of new knowledge and using it to make better the school and were deficient in reaching knowledge sources. Lastly Boydak & Erten (2008) concluded in their study that public school administrators were more proficient than private school administrators in implementation of knowledge management skills.

After studying the literature on the subject, it can be concluded that according to their own perceptions, national education administrators, school administrators and education supervisors consider themselves generally to be “highly competent” and/or “moderately competent” in knowledge management as it is seen in that research. However, considering the dimensions of knowledge management, a general conclusion may be reached that the older and experienced supervisors view themselves not so competent at holding, using and in a sense at sharing knowledge.

According to these results, the following suggestions should be given:

- In an ever changing and growing world, through effective knowledge management implementations, the societal, economic and scientific changes should be closely monitored, and up to date knowledge should be gathered, shared, used, stored, and generated for creating development opportunities and competitive advantages. To achieve such a goal national and international academic communication and interaction should be realized and partnerships should be established.
- The research results shows that supervisors with 6-15 years of work experience are the most competent group regarding the dimensions of knowledge management process. This finding leads us to believe in that these individuals, who are at the most efficient point in their careers, also feel a higher degree of responsibility and enthusiasm when it comes to knowledge management. On the other hand, the groups with less experience in supervision (5 years and less) are relatively less competent in many dimensions. The cause may be that when selecting and educating a supervisor, not enough attention is paid to teaching the knowledge and skills needed for knowledge management. To enhance the know-how and skill levels of holding, using, sharing, storing and generating knowledge, which is a vital for sustainability of an organization, supervisors must be educated before and during employment.

- Since the supervisors with more work experience and the ones at older ages considered themselves to be “moderately competent” in holding and using knowledge, they have to be trained especially in using and implementing knowledge technology.
- To increase supervisors' proficiency in knowledge management dimensions and amplifying knowledge management skills, education projects and applications should be implemented.
- Importance should be placed on education supervisors gaining experience in abroad for following and assessing educational developments and opportunities in other countries.
- As knowledge management requires constant research and innovation, in the long run all supervisors must have a graduate education.

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