Research Article

KNOWLEDGE MANAGEMENT IN SECONDARY SCHOOLS: A CONCEPTUAL MODEL WITH GROUNDED THEORY APPROACH

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Abstract: Aim/purpose:The present paper examines the viewpoints in the literature regarding knowledge management and delimits the need to address the variables which influence and explain the knowledge management procees in Iranian secondary schools and the authors aim to design the theoretical model of KM wity Grounded theory.

Methodology: The Grounded Theory methodology was chosen due to its ability to extract theory from data. After having viewed the theoretical literature related to the subject of the study, whether it was provided in references or in scientific journals and theses. This study is an exploratory, analytical study and follows the approach of collecting and analysing data to draw conclusionsThe qualitative research focused on 14 in-depth semi-structured interviews with professionals from the Iranina education sector.

Findings: The results of data analysis(Three stage coding) showed 280 open code, 116 concepts and 16 categories have been classified and organized according to their connections with each other and the perspective they envisage.Finally we will present all the main variables with their sub-elements, adequate correlations in literature and citations from the in-depth interviews undertaken.Designed model is consist of componenets,causalfactors,axialfactors,strategies,axial phenomenon and consequences.

Implications & Recommendations: This study offers a deeper understanding of knowledge management process for educational administrators and teachers. This study is also of value in managerial perspective as it helps they to improve their practices by use of individual and organizational consecouences of knowledegmanagement . Most interviewees might accept that KM can help improve their practice but it needs the support of various dimensions such as Knowledge-based culture,humanfactor,technical support and managerial factors.

Keywords: knowledge ,knowledgemanagement,Grounded theory.

1.Introduction

Recently, the roles of knowledge management for organizational performance especially educational organizations have become clearer. There is no doubt that in the current ages, given the speed and acceleration of knowledge, organizations can not expect excellent performance regardless of this category. A brief look at the performance of progressive organizations in the world shows these organizations have realized the importance of knowledge management and have been accepted as a new approach and have tried successfully to implement it . The process of globalization not only provides an opportunity for companies

to produce products and provide services to large markets, but also increases the intensity of competition. To survive in such a highly competitive environment, organizations must effectively use their knowledge resources to create competitive advantage and greater ability to operate and adaptation (Hendzik et al., 2018)

Organizations have the potential to learn and that new knowledge may be effectively incorporated into specific practices, so that the knowledge is accessible when needed. Schools, like most organizations, should learn and gain knowledge so as to improve decision making and innovation especially in the age of increased external and internal pressures for change and improvement. KM can be used as a strategy by schools to improve competitive performance. Zhao (2010) points out that school KM can facilitate acquisition, sharing and application of teacher knowledge in school so as to better manage and apply schools' tangible and intangible knowledge assets, especially the professional knowledge, experiences and competencies of teachers. Several recent studies have explicitly called for new research to focus on KM in schools (Chu, Wang, Zhou & Yuen, 2009; Ge et al., 2006; Wang &Jia, 2005, Zhao, 2010). In this paper, KM at organizational level will be the focus. This study is the starting point to look for insight into the design and implementation of KM model at organization level (secondary education) and provide strategies to KM practice in a secondary school. The rest of the paper is organized as follows. Section 2 gives a brief litrature of KM and discusses the need for KM in schools , which were used to design the interview questions for investigating experts perception of KM in this study. In Section 3, we will present all researches conducted of knowledge management in schools.Section 4 provides details of the methodology conducted in this research. The results of the study are presented in Section 5. Finally, Section 6 concludes the study and gives insight into and suggestions for further work.

2-Litrature Review

Definition of knowledge management and its importance to schools

KM estimation has nine points of view (Kianzadeh& Golban,2005): Knowledge measurement in procedures and items, and authoritative estimation in view of procedures of KM . In addition, Chang and Wang (2009), had arranged the estimation strategies into seven methodologies and they are methodology variables, representative qualities, administrator attributes, authoritative society, review and appraisal, data innovation and working systems. Educational institutes are the essential places for utilizing and delivering information. Utilizing KM, enlightening associations will have the ability to play out more sufficiently by spreading data among social orders, and augmenting the route toward learning and teaching to abroad Educational Institutes (Sarkar Arani,2005). One of the management fields is knowledge management, that has been growing in implementation. All organizations in the world are competing to implement knowledge management for their members. It has been known that the greatest progress in the business industry is ransformation of the industrial society into a knowledge society Since 2005, (Fernanda and Salva, 2016). Some authors have offered their views to describe knowledge and management stimltaneosly with definition of Knowledge Management .Schwartz defines knowledge management as "a fluid combination of regulated experience, values, background information, and insight." "Expertise provides a framework for evaluation and combinination the new experiences and information. It originates in the minds of scientists and is used in organizations" (Schwartz, 2006). According to Chao and Kurt, knowledge management is the ability of management the organization to provide the best performance (Chao and Kurt, 2014). Salva and Susanti, argued that the main purpose of implementing knowledge management is to ensure that the individual's knowledge becomes organizational and belongs to the organization, so it will not be a big problem if someone who

has valuable knowledge is not present in the organization for a long time (Salva And Susanti, 2017).Fernanda and Salva (2016),describe knowledge management as 13 components: social networks, system design, communities, motivation, criteria, culture, intellectual capital, collaboration, organizational learning and organizational memory, competitive advantage , Strategy, transfer, privacy and trust. Knowledge management is supported by 14 technology actors, including: computer, network, security and control, interface and human factors, data mining, software factors, semantics and ontology, indexing and storage of unstructured data , knowledge display,information and retrieval, meta-knowledge, knowledge discovery, transition and portals .

School need to capture the key knowledge of its workforce and learn from its lessons is evident. The Administration staff and our own workforce are calling for School to infuse knowledge managementpractices into the daily work of the Academic Operation Area. What is "knowledge management"? "Knowledge management is achieving organizational goals through the strategydriven motivation and facilitation of (knowledge) workers to develop, enhance and use their capability to interpret data and information, experience, skills, culture, through a process of

giving meaning to these data and information"(Bijerse,1999). Schools face many problems in a rapidly dynamic global economy (Birgeneau ,2005). If we agree that the 21st century economy is mixed with different intellectual challenges, managing knowledge/intellectual assets which is to start from schools will be a positive step in the right direction. Teaching and learning organizations today and in the near future, will experience numerous and intensified external pressure influenced by globalization and the past few decades have brought about pressure on educational system to respond to global challenges that will place the schools on a better pedestal to perform .

-Evolotion of knowledge management

knowledgemanagemnet evolution is devided into three periods . The study of the stages of management development shows that in the first stage, knowledge is considered as the domain of scientists and philosophers. The roots of the philosophy of knowledge have led to the formation of the recent concept of knowledge management.Knowledge management topics started by Plateau and Aristotle to answer this question: What is knowledge? He identified three key concepts: "Knowledge is perception", knowledge is a correct idea and belief, and knowledge is a correct belief with a reason and argument. Information management systems emerged in the mid-1970s (Beer, 1972). Cybernetic concepts also emerged in the mid-1900s with the rise of computer power. From now on, concepts such as artificial intelligence and specialized systems will emerge. Numerous activities have been carried out by commercial, intellectual and social forces, which are classified into five categories (Carl Wiig, 1999). This is the entry into the third stage. The late 1980s and early 1990s saw simultaneous efforts in the field of form. We have been grasping the concept of knowledge management, which finally emerged in the mid-1990s as a specific discipline of knowledge management. In the early 1990s, the study of "knowledg workers" was seen as a topic of interest. Peter Drucker often credited it by amount of knowledge activity. He introduced a new type of staff, " knowledg workers " and some of their special characteristics. knowledg workers is a unique individual and is not a replaceable component in production to operate in an industrial economy (Drucker, 1992). In the mid-1990s, the revolution in the personal computer and its applications reached a developed status. Also in the mid-1990s the world wide Web with the rapid growth of internet sites and the number of users in South America. This situation continued to the emergence of Web 2.0 and access to information sites and group and collection communication tools such as

intranets and blogs, and was expressed important claims about information technology effect to successful knowledge management. In the late 1990s, McIrvey's second generation of knowledge management focused on demand instead of supply and recognition a more complex environment(an environment plays a less role and intra-organizational knowledge be seen at multiple levels (McIrvey, 2002).).

knowledgemanagemnet generations and percpectives

There are generally three knowledge managemnetgeneration.Snowden noted that we are moving towards a third generation of knowledge management: first generation: late 1980s to mid-1990s, mostly focused on computer-based information and information technology, second generation: mid-1990s to early 21st century Focusing on the transformation of tacit knowledge into explicit knowledge, which began with the introduction of the Nonaka four-dimensional model (Snowden, 2002), third generation: started in 2005 based on the theory of complexity. He argues that the new generation (third generation) is not a simple revolution but a paradigm shift - a "major shift" as a transition from Newtonian physics to modern physics and in general its major challenge is the conceptual independence of the management process and scientific management . In terms of perspective have been proposed two technocratic and human-centered views. The technocratic view is one of the organizational theories that is favore of information technology enthusiasts with literature related to computer science and information. The main advocators of this viement issues. However, the technocratic perspective is of particular importance because information tools can faciliate the data extraction and usage and can play a very positive role in the collection, analysis and dissemination of organizational information. In contrast, the human-centered view advocators argues that challenge is that the knowledge processes, and much of value-added knowledge is coded, and stored by machine, and human minds, management skills, and the individuals struturs are so important (Ashock, 2011).

Research Questions

To get both subjective and quantitative information, research inquiries were utilized. Particular inquiries that utilized as a part of this examination are:

1-What are teachers' understanding of Knowledge Management ?

2-What are the affective conditions for KM activities?

3-What are existence limitation to KM in schools?

4- What are solutions to deal with in KM?

5-What are KM benefits to school and teachers?

3- Research background

A review of the background of research on knowledge management in educational settings, especially schools, shows that no research has been done on the design of knowledge management model, but this concept has been studied alone or in relation to other variables. The concept of knowledge management is important for researchers in schools. A number of studies have been conducted and their findings are presented in Table (1):

Table1:summary of previous researches

	Researchers,ye	Goals and method	results

	ar		
1	Mahdavynasr et al(2014)	Investigating the effective factors on the establishment of knowledge management in primary schools in Qazvin	Information technology, organizational learning and human resources
2	Jooraabchi&Khosravi(2008)	Investigating the effect of knowledge management on the performance of high school teachers in Tehran girls' schools	The more teachers are familiar with the components of knowledge management, the more they have access to the components and increase their performance.
3	Qaseminejad& Azari(2015)	Investigating the Relationship between Knowledge Management and Job Performance of First Secondary School Teachers in Sirjan	There is a significant relationship between all components of knowledge management and job performance. There is no significant difference between the level of knowledge management based on teaching experience. There is a significant relationship between teachers' education and knowledge management and job performance
4	Garfield (2014)	Suevey the benefits of knowledge management	Facilitate access to relevant information and resources, faster and better decisions making, reuse ideas, documents and
5	Eric cheng(2015)	Exploring the implications and benefits of knowledge management for school education	Development human capital in a competitive economy, interacting with one's environment, influencing teachers' flexibility, performing tasks together, deciding and solving problems together, and coping with

			change
6	Alksasbeh et al(2018)	Investigating the factors affecting on the successful implementation of knowledge management in Jordanian higher education institutions	IT infrastructure is the strongest predictor of KM implementation success followed by processes, measurement, organizational culture, and organizational knowledge
7	Raudeliuniene(2020)	Survey the Knowledge Management Practice in General Education Schools as a Tool for Sustainable Development	There is a strong potential for implementing knowledge management in secondary schools, but there is a lack of motivation for teachers and a lack of financial resources to use knowledge management methods and improve the knowledge infrastructure to implement knowledge management activities.
8	Jingyuan(2010)	Survey the School knowledge management framework and strategies as a new perspective on teacher professional development	the knowledge management strategies to improve teacher professional development, including school organizational reforger and knowledge leaders, constructing learning school and organization learning culture, establishing teacher knowledge management system of teacher professional development, encouraging team learning, teaching cooperation and knowledge sharing, establishing performance assessment mechanism of knowledge applications and development.
	Handzic(2008)	Auditing knowledge management practices:	Leadership, technology, learning culture are among the key factors in implementing

9		model and application.	knowledge management activities
10	Hariharan. &Cellular(2005)	Investigating the key factors of knowledge management	Participatory culture, appropriate motivational system, learning culture, management support, linking knowledge activities with organizational processes and information technology
11	Wen-Ling& Chun-yen(2016)	The effects of knowledge management capabilities on perceived school effectiveness in career and technical education	Knowledge management capabilities consist of two main dimensions, namely KM activator capabilities and KM process capabilities. The first includes IT structures, cultures, and support, while the second includes purchasing, storage, sharing, and applications. In terms of the relationships between the dimensions of the model structure, knowledge management empowerment capabilities predicted the capabilities of the knowledge management process capabilities, and knowledge management process capabilities effectively predicted the perceived school performance.
12	Ferguson & Hider (2006)	Survey Knowledge Management Education in Australia', in P. Hider & R. Pymm (Eds.), Education for Library and Information Services: A Festschrift to Celebrate Thirty Years of Library	Development of social networks, formation of activity communities and information tools

		Education at Charles Sturt University	
13	HiebertJames. Gallimore Ronald and James W.Stigler(2002)	Investigation the knowledge Base for the teaching profession	Easy access to required information, determining information needs and creating a culture of learning in schools, forming activity communities, discussion sessions, in-service courses and using information tools; the existence of a group in schools called knowledge workers
14	Dareai(2011)	Identify and validate the components of knowledge management process	components of knowledge management, are: production knowledge,savingknowledge,sharing knowledge and applied knowledge and KM requires excellent management on interpersonal skills and also existence of appropriate informational technology infrastructures and finally uncovering of personals tacit knowledge requires trust-oriented culture and realistic planning in the knowledge – based in order.

In order to develop a suitable KM model for schools, we need to identify the key factors or variables of KM. This study focused on experts perception of KM in education especially secondary schools from an organizational perspective. Education experts' understanding and expectations of KM in the school environment were investigated. The reasons of the study includes the following three aspects: Firstly, collecting data regarding employees' perception of KM is necessary preparation for any KM practice, Secondly, this study conducted of investigating experts' perception of KM using a survey instrument, Thirdly, the integration of KM and education administration is still a newborn phenomenon. Most KM researchers do not have a background in education and they always neglect the gap between KM and KM in schools. We claim that a KM project in a school needs knowledge and suggestions from the teachers, who are experts in education and pedagogy. Through this study, we want to explore experts' perception of KM in schools in terms of KM implementation.

4-Methodology (The Grounded Theory)

The present study is a qualitative study and the strategy used in this research is data-based theory (Grounded theory) . This methodology offers systematic and at the same time flexible guidelines for data collection and analysis to construct theories which consist of abstract

conceptualizations of substantive problems that people experience. Grounded Theory (GT) is built upon two key concepts (Suddaby 2006): constant comparison (no separation between data collection and analysis) and theoretical sampling (envisages decisions about which data to collect by on-going interpretation of data and emerging conceptual categories). Bryman and Bell (2007) consider the constant comparison and theoretical sampling together with coding (whereby data is broken down into component parts which are given names) and theoretical saturation, the most important tools of GT.Research participants(statistical population)include field professionals .Therefore, the proposed qualitative study envisages in-depth interviews with professionals from Iranian education and high schools. As the theorybuilding process "occurs via recursive cycling among the case data, emerging theory. Because theory-building research using cases typically answers research questions that address "how" and "why" in unexplored research areas particularly well (Edmondson and McManus 2007) and especially for the rigour of the research, the authors have chosen several cases with highly knowledgeable informants:seven from expert faculty member from educational administration field and seven expert from organizational position related education. For the theoretical sampling step, a representative heterogeneous sample of professionals from education sector of education were chosen with ages ranging from 37 till 57, both male (5 persons) and female (9 persons) with 7 to 25 years of experience in their field of expertise. The interviews took four weeks to be finalized. The duration of each individual interview was approximately half an hour till one hour at the employee's working place (own desk or session room). The data was recorded and the interviewer took notes. Saturation of the categories has been reached after 14 interviews, with 20 hours of observation, due to the fact that from this point further the interviewer has heard nothing new (Bryant and Charmaz 2007). The authors decided to use the in-depth semi-structured interview tool due to the following advantages:

- it is composed of a series of questions on a certain theme under a planned form (interview guide);

-a script is pursued but sometimes the respondent has the liberty to express freely for new interpretations;

- as the interviewer learns more about the topic, the questions that do not provide satisfactory answers can be removed or replaced with more efficient ones – a specificity which allows the research to continuously adapt to new situations.

the interviewer can change or choose to pose other questions depending on the final scope;

The first part of the interview is reserved to short questions about personal information like: name, sex, age, domain of activity, position and work experience. Personal questions are followed by introductory questions and then specific ones. However, the interview process continued until the fourteenth person. The decreased trend and the high time spent to extract new code indicate the realization of the issue of theoretical data saturation.Accordingly it can be ensured that the theoretical saturation category is observed in a desirable way and data collection has continued to the desired level. For collected data evaluation were used acceptance criteria such as be aplicable or usefulness, appropriateness, concepts, logic, depth, innovation and sensitivity. The interviews have been transcribed and analyzed according to specific coding steps (open, axial and selective coding). Data from interview notes and transcriptions has been conceptualized line by line, segment by segment, while the particular iterative phenomena in the text has been temporary labeled following Strauss and Corbin (1990)'s coding steps: open coding (labeling and categorizing phenomena, grouping concepts at an abstract level), axial coding (developing main categories and their sub-categories) and selective coding (integrates the categories to form the initial theoretical framework). Due to the

fact that codes are always changing to fit the right data, the constant comparison of data has been used to find similarities and differences between them. Clusters of initial codes have been formed till basic categories emerged. The open coding process comprises a total of 14 interviews which contain 116 concepts. In the next axial coding stage, the concepts are raised at a conceptual preliminary category level. Each category has specific notes for the ease in its further analysis. These notes contain: the number and title of the category, a short description, the concepts it comprises and strongly related categories. The axial coding stage comprises 16 categories based on the 116 concepts retrieved in open coding. Each category is described by its concepts and relates to other categories. The final selective coding explores the relationships between categories in the search of the most relevant ones. This stage does not take into consideration not only how many connections one category has with others but also how many other categories have reciprocal connections with the first. From this analysis the authors have modeled a theoretical model regarding influencing variables in knowledge management which is presented in the following.

5-Results and discussion

Based on interviewees' responses most teachers did know the meaning of Knowledge Management (KM), and they did not know too much about KM components. They mentioned some main points of KM as knowledge creation, knowledge transferinf, knowledge usage, identificatiom of knowledge and knowledge update .

T**able2:**Analysis of the Interviewee Response of the question What's your understanding of KM?'

Main points mentioned by interviewee
- knowledge creation
- knowledge transfering
- knowledge usage
- knowledge identification
- knowledge update.

Most interviewees regarded the most important function of KM as the sharing and storage of knowledge. They were aware that knowledge could be a basic component of school and shoud be stored. They also realised that knowledge should be converted from tacit knowledge to explicit knowledge, so that it could be shared within the educational organization. Furthermore, knowledge also needed to be combined and updated for better use.During this research process was found that studied axial phenomenon is knowledge management.Respondentsmentioned similar items were classified to 7 categories as follows:

Table 3: Open codes and categories related to Axial phenomenon

Category	concept
Knowledge-vision setting	Analysis of strengths and weaknesses, vision drawing, designing regulations to implementation knowledge management, implementation of knowledge management plans as a pilot project
Identify and targeting	knowledge goals setting, definion of knowledge needs, reviewing the current situation transparently, identify strategic knowledge points, distributing knowledge management plans among experts, extracting growth charts of different organizational knowledge, drawing knowledge maps, analysis organizational knowledge scenario by knowledge management specialists
knowledge teaming	Selection the desired scenario, selection knowledge specialists, placing knowledge specialists in the team
Construction knowledge	Determining knowledge goals, defining knowledge needs, reviewing the current situation transparently, identifying strategic knowledge points, distributing knowledge management plans among experts, extracting growth charts of different organizational knowledge, drawing knowledge maps, analysis organizational knowledge scenario by knowledge management specialists
Maintenance and update knowledge	Gathering organizational knowledge, storing organizational knowledge, retrieving organizational knowledge when needed, defining and designing knowledge packages, coding new knowledge, using written documents to store explicit knowledge, using CDs and DVDs to store explicit knowledge, formation expert databases to store knowledge

Knowledge sharing	Transfer of knowledge to the right place at the right time and with the right quality, internship with experienced people and learning through mastery, imitation and practice in the workplace, - Joint activities between teachers, informal meetings outside the workplace, - Exchange of views on needs New educational for learners, - Holding scientific trips inside and outside the country, - Engaging in the flow of social capital, - Creating effective communication networks (internal and external) in the educational system, - Raising educational issues (teachers and learners) in meetings Educational groups, holding face-to-face conversation sessions for exchange of views between teachers with the presentation of specialized educational issues, - Using brainstorming techniques for interpersonal interactions, - Providing a virtual space for scientific interactions between teachers, - Forming working groups, - Create question and answer areas
Knowledge utilization	Invite retired teachers to deliver a speech and documentation the most important parts of their lectures, documentation and presentation the most important material learned in an extracurricular educational mission, Hold symposiums on a problem in teaching and learning and documentation the most important Finding, Retrieving knowledge and applying it in problem situations, Retrieving knowledge and applying it in decisions makings

Most interviewees emphasized some main points of KM process as follows : vision drawing, designing regulations to implementation knowledge management, implementation of knowledge management plans as a pilot project, knowledge goals setting, definion of knowledge needs, reviewing the current situation transparently, identify strategic knowledge points, distributing knowledge management plans among experts, extracting growth charts of different organizational knowledge, drawing knowledge maps, analysis organizational knowledge scenario by knowledge management specialists , Selection the desired scenario, selection knowledge specialists, placing knowledge specialists in the team , determining knowledge goals, defining knowledge needs, reviewing the current situation transparently, identifying strategic knowledge points, distributing knowledge management plans among experts, extracting growth charts of different organizational knowledge, drawing knowledge maps, analysis, gathering organizational knowledge, storing organizational knowledge, retrieving organizational knowledge when needed, defining and designing knowledge packages, coding new knowledge, using written documents to store explicit knowledge, using CDs and DVDs to store explicit knowledge, formation expert databases to store knowledge ,

internship with experienced people and learning through mastery, imitation and practice in the workplace,joint activities between teachers, informal meetings outside the workplace, exchange of views on needs New educational for learners, holding scientific trips inside and outside the country, engaging in the flow of social capital, creating effective communication networks (internal and external) in the educational system, raising educational issues (teachers and learners) in meetings Educational groups, holding face-to-face conversation sessions for exchange of views between teachers with the presentation of specialized educational issues, using brainstorming techniques for interpersonal interactions, providing a virtual space for scientific interactions between teachers, forming working groups, create question and answer areas.

The main conditions for KM implementation

Interviewees mentioned the prerequisites for support of implementation of Knowledge Management (KM) in school. They mentioned some main prerequisites and main condition for KM implementation (affective conditions and contextual factors on the axial phenomenon of knowledge management) .They mentioned some affective factors on KM process that were classified into 4 categories as follows:

Table4: Open codes and categories related to causal conditions

	Dimension	**Category**	**concept**
1	**Causal conditions**	**knowledge-based culture**	-Trust and communicetion between teachers,External adaptation and integration within the organization, strengthening specific behaviors and prevailing values in relation to knowledge management (social control), group identity, institutionalization of belief in professional growth, reforming the learning culture, promoting the team moral , risk-taking , Salary incentives, Supporting the new vision and mission , Coordinating and adapting individuals to policies, missions and knowledge goals to create a group identity, Promoting a culture of learning, transparency Accepting innovation, Accepting criticism Positive - Providing an informal space for unrestricted discussion Emphasis on specialization in the school environment, the value of continuing learning, Institutionalization of belief in professional growth, Considering change as an opportunity, Trust and environment Safe work problem solving and opportunities for voluntary sharing, encouraging and supporting knowledge sharing and allowing people to try and make mistakes, experience and learn

2		**Human factor**	Individual skills, Leadership competence and control of knowledge activities, Teachers 'understanding of knowledge management and its benefits, Examining teachers' attitudes and feelings towards knowledge management
		Thechnical support	Creating information silos, - Accessing the library with leaky resources, Internet access, Intranet access, forming virtual groups, blogs, voice chats and portals
3			
4		**Managerial factors**	Definion of knowledge management strategies related to goals of organization and external cooperation, Designing knowledge management activities with the presence and involvement of all stakeholders (adopting a systematic approach), Supporting managers and leaders, Participatory decision-making Appropriate budgeting

Also interviews analysis showed interviewers mentioned items affects on the axial phenomenon KM but their impact is less than items mentioned in condition sector.Mentioned factors classified into 3 categories such as: organizational factors, Knowledge-creating environment and Organizational factors.Table 5.

Table5: Open codes and related contextual categories

	Category	Concepts
		Finding the existent problems and planning to

1	**Knowledge-creating environment**	implementation rapid and continuous reforms, Organizing and providing knowledge outside organizational needed resources , to consider human resources as a source of innovation, Responding to the demands of society, Flexibility conront of environmental changes
2	**Organizational factors**	Proper planning, design, coordination and evaluation, considering a specific related unit to knowledge management, Flat organizational chart with multilateral communication flow, There is a focus on decision-making and high recognition in labor relations, With knowledge-based activities, Defining knowledge roles in the structure of schools, Limiting communication to team, departmental and even organizational boundaries, Establishing a free flow of information, knowledge and ideas Ease of access to specialists and experts, Permission for free discussion in informal space, free and multilateral dialogue, with the participation of all in the meetings of the organization
3	**Knowledge sub-stracturs**	Storage space, support for coding and collaboration between people Executive information system, computer network infrastructure (Internet and intranet formation), knowledge repository (a common type of memory for continuous display of knowledge and information in the organization), integrated layer (combination of different knowledge systems with knowledge repositories and interaction between user and computer system In a network infrastructure context or in the sense of organizing and linking knowledge elements extracted from various sources for semantic analysis of organizational knowledge base), Knowledge systems (providing advanced technological innovations of different systems to support knowledge activities and processes)

Some interviewees thought that culture, management,human factor and IT were all important for Knowledge Management (KM) to be implemented successfully in schools. However, out of the four conditions of KM implementation, most of the interviewees regarded knowledge-based culture and human factor as the two most important conditions of KM implementation. Therefore, if the school personnel would like to implement KM in school,

they should firstly change the perceptions or attitudes of people and the culture of the organization. Interviewees reflected that they needed communication and interaction to understand the benefits of KM. Interviewees concluded that a culture of willingness to share their own knowledge and trusting each other are very important for implementing KM. Some interviewees reflected that at present the culture to allow knowledge sharing in the researched school at present has not yet been established and they understood that such culture would need considerable time to be inculcated.They point that support for coding and collaboration between people executive information system, computer network infrastructure (Internet and intranet formation), knowledge repository and interaction between user and computer system, proper planning, design, coordination and evaluation, considering a specific related unit to knowledge management, focus on decision-making and high recognition in labor relations and organizing and providing knowledge outside organizational needed resources are so important to successful implementation to KM precess in schools.

Limitation to KM implementation in schools

Most interviewees mentioned there are some challenges that should be consider in schools to proper KM implementation as follows:

Table6: Open codes and categories related to interfering conditions

	Category	**Concepts**
1	**knowledge-based educational organization**	- complexity of working with knowledge management tools for teachers , Proper use of knowledge management tools , The need for a vision on how to use the collected information to achieve organizational goals, Teacher motivation (teachers need to be sufficiently aware of the relationship between knowledge management and gaining a competitive advantage for the educational organization)

Most interviewees noted that there are challenges and limitations about strategies of KM implementation in schools should be concerned by managers as foloows: a need for a vision on how to use the collected information to achieve organizational goals, teacher motivation, complexity of working with knowledge management tools for teachers and proper use of knowledge management tools .

Solutions to deal with in KM

Strategies in data-based theory refers to provide solutions to desired phenomenon that its purpose is to manage, accomplish and sensitivity to that phenomenon(Struass& Corbin.1990).The interviewee mentioned to response of the question:What are Solutions to exposure to and proper managing KM:

Table 6: Open codes and categories related to strategies

	category	concept
1	**Processes review**	Supporte the community of activities (experts), Integrating people, processes and technology together, designing knowledge management approaches with the cooperation of stakeholders, specializing knowledge production, to build organization on professional knowledge (including related knowledge or expertise to specific contex or field that produces knowledge-based goods and services)
2	**leadership support**	- Leadership support to knowledge approaches of target community, Financial participationmanagement and leadership , Putting leaders at the forefront in knowledge sharing, Financial and psychological support of leaders to knowledg workers
3	**goal and strategy**	Definination the vision and mission of the organization in the field of knowledge management, Determination an agreement about results and outputs, evaluation and adjustiment the movement of the organization in the most appropriate direction, Mapping the future, Mobilizing resources to carry out activities, Determining the current position in the field of knowledge activities Putting it on paper and talking about it, The capacity of experience and change, Changing the strategies to improve technical, administrative, structural and resource management subsystems, and - Strategic insights and Changing strategies to achieve a wise organization
4	**consistent and critical climate**	Adaptation the knowledge management approaches to communities that encourage innovation and positive criticism, Positive criticism plan to motivate participation, Acceptance change and transformation by organization , Existence of transparency to strengthen cooperation,abstinence of contention, Increasing the capacity of acceptance of mistakes

Some interviewees thought that integration between individuals, technology and process, support of community of practice and institutionalize professional knowledge can ensure the effective management of the knowledge management process in schools.most of the interviewees regarded leaders and strategists as the two most important factors of KM managing. Leaders' support was also regarded by interviewees as a solotion for KM managing such as "financial and psychological support of leaders toknowledg workers and Leadership support to knowledge approaches of target community".

Expected outcomes(benefits) of KM process

Most interviewees expressed the expected outcomes of Knowledge Management (KM) in school. They mentioned some main expected outcomes of KM implementation which were classified by the authors (researchers) into two general categories, individual and organizationalconsequences as follows:

Table7: Open codes and categories related to consequences

	Category	concept
1	**Individual**	-Encourage and support of knowledge reconstruction - stakeholders Wide-spreading participation - Reward system refom based on the amount of knowledge sharing participation - Maximize effective learning - Improving the speed, quality and desirability of educational services
2	**organizational**	-Teamwork and emphasis on synergy - Gaining the ability to innovation and confront of problems - Trying to solve learning problems -Improvement to access the global and domestic knowledge - Making dynamic decisions - Time optimization - resources optimization - Maximizing effective learning - Effort to create value especially social value - Development of knowledge-based learning

Most interviewees noted that KM could help them inlearning process (speed and effectiveness).Also could help them learn experience from others. They felt that KM could allow them to acquire experience and knowledge to improve their practice . They felt that it could also help them to be rewarded based on on their participation in knowledge activities. Interviewees thought that teamwork and synergy are encouraged and innovation is created to solve educational problems. They also felt that engaging in knowledge activities through participation leads to dynamic decision making and can cause optimal use of time and other organizational resources.

Finally in the axial coding stage, the axial category methodically was selected and related to other categories. After study of existing theoretical litrature and experts intervieing, the main and sub-categories related to knowledge management were extracted and was presented the final conceptual model .See figure 1.

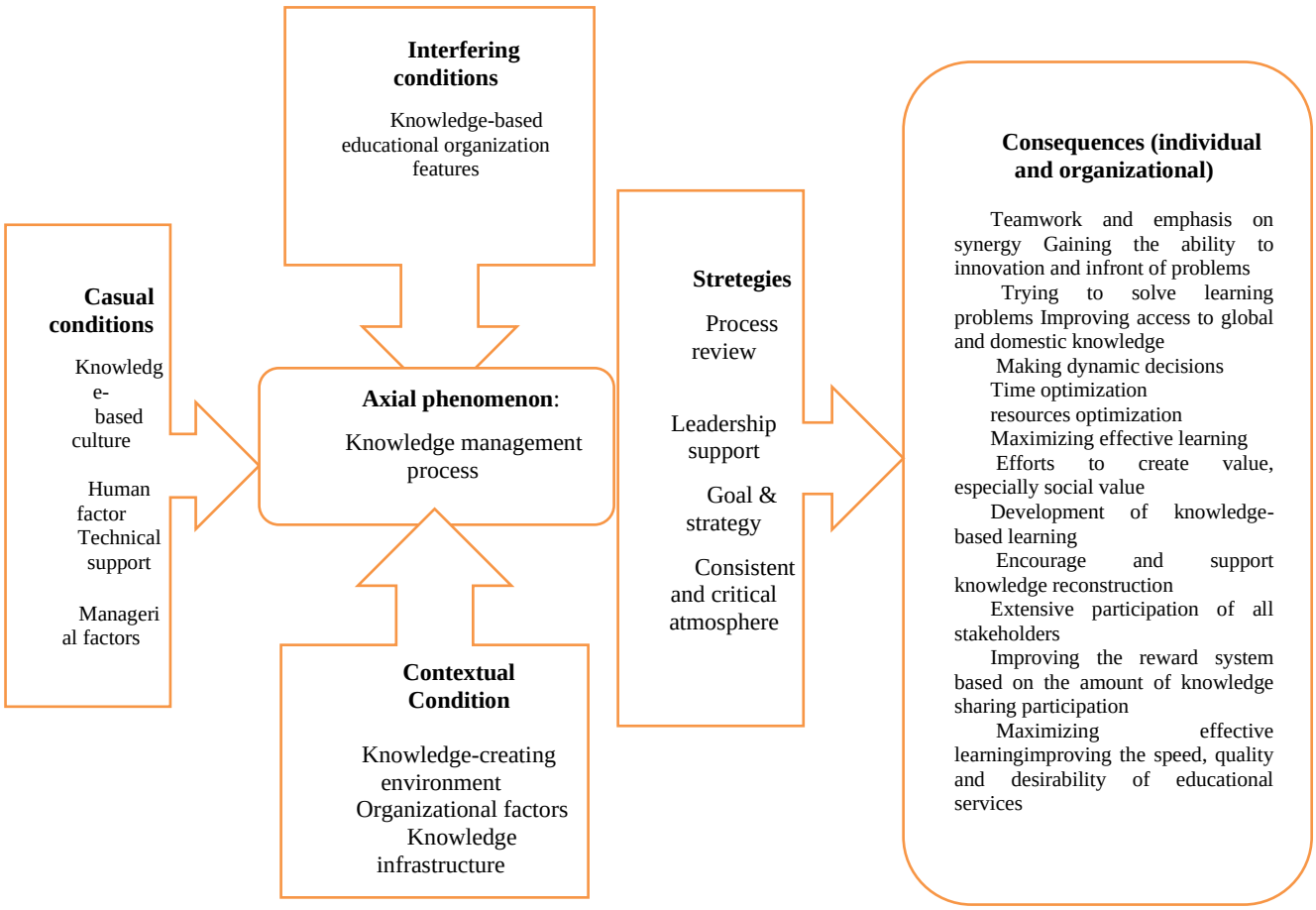

Figure1: Theconceptual model of knowledge management variables in Secondary schools

6- Conclusions

The main purpose of this research was designed theoretical model to KM in secondary schools.As an initial investigation of KM activities in secondary schools, this study investigated experts' (educationist ,expert teachers) perceptions of KM implementation via interviews. Most existing research has investigated KM in schools by correlatioanal or descriptive method bat this research has investigated KM by a qualitatitive approach such as Grounded theory .Also this study investigated especially teachers' perceptions of KM in school. Most existing research has investigated KM in schools from the point of view of experts or even outsiders, and few studies have investigated teachers as end user's of KM process. This study might also serve as a diagnostic step in further study of KM in schools, i.e., developing a better understanding of key problems to be deal with in KM and also affective factors and outcomes to KM in schools. Based on the literature review, we designed the interview questions and conducted interviews in the school in this study. The interview

involved 5 questions to study perception of KM, affective factors for Support of KM, existence limitation , solutions to deal with KM and expected outcomes of KM.

Data-based theory is a basic theory and if supported by existing theories it will gain more credit(Adib Hajbagheri,2005).Based on an extensive review of existing literature and background the extracted model in this research has similarities with findings of Alksasbeh,(2018),Handzic et al(2008), Ferguson& Hider (2006),Qaseminejad et al(2015),Hiber et al(2002), Jingyuan (2010),Mahdavinasr(2014), Garfield, (2014) , Wen-ling(2016) , jooraabchi&khosravi(2008), Jingyuan (2010),Hariharan&Cellular.B.(2005), Handzic et al(2008) , Raudeliuniene,(2020), cheng(2015) and Jingyuan (2010).From the interviewees' response to the question of "Understanding of KM", we found that they recognized KM was important for educational organization to better manage knowledge as an asset that can be constructed, identified , stored, shared, transferred or transformed among members. They could know that "knowledge creation , knowledge sharing, knowledge usage, setting goal and identification of knowledge, update knowledge teaming knoewledg and setting vision of knowledge were the essential KM components. From the results of the question of "affective factors for Support of KM technical factor , knowledge-based culture ,knowledge frustrations , people and leaders, support which were key factors of affective knowledge activities implimentaion. Among them, people and culture were most frequently mentioned among interviewees. Actually, people and culture were regarded in this study as closely related and mutually dependent conditions. Interviewees reflected that trust, communication, and interaction among teachers did foster building up a community with a sharing culture in schools for KM process. For the part on "Expected benefits of KM", most interviewees expected that KM could help them acquire, experience , information and knowledge from others to improve their practice and enhance their skills and efficiency in their work. They felt that it could also help them to be rewarded based on on their participation in knowledge activities. Interviewees thought that teamwork and synergy are encouraged and innovation is created to solve educational problems. They also felt that engaging in knowledge activities through participation leads to dynamic decision making and can cause optimal use of time and other organizational resources.

In conclusion, the seven key components in the framework of the study can help us understand educational expert especially teachers perceptions of KM in school. From this study, we can note that the seven KM components: "Knowledge Creation", "Identify and targeting",knowledg construction, knowledg teaming, knowledg targeting, knowledg update, knowledg vision setting and knowledg sharing are the components of the KM and the other components: "Leadership and Support", "Technology and Infrastructure", "human factor", " knowledge-based culture, managerial factors ,Goal and strategy, knowledge-creation environment and Knowledge-based educational organization features are the condition and contextual componentsof the KM Schools need to provide training to teachers to allow them learn more about the process components, so that teachers could have better "People skill" and "knowledg Culture". Moreover, the other Condition Components: "Leaders Support" and "Technology and Infrastructure" should also be strengthened to facilitate KM activities implementation. Both causual and contextual conditionneed to be addressed in order to foster teachers' positive perceptions, attitudes and feelings towards KM and in turn facilitate KM implementation.According to research results the biggest challenge of KM in schools is not IT but the main challenge is awareness and knowledge.knowledge management requires conscious leadership and participatory management.Also existence of creative culture is key factor to KM.It is necessary for schools to pay attention to KM as a main map to better perception of solutions to improve knowledge activities.

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