Knowledge Sharing Among Secondary School Teachers

By

Nabaa Dhahir Kamil Al Fatlawi
Faculty of Education for Humanities/Babylon University/Iraq
Email: nabadaher@gmail.com
Ayaam Wahab Al Bermani
Faculty of Education for Humanities/Babylon University/Iraq

Abstract

The Current research aims to identify cognitive sharing in high school teachers، and for this purpose, the researcher reviewed several previous studies and some theories related to the research topic. The researcher adopted a scale of cognitive sharing and presented his paragraphs to a group of arbitrators specializing in educational and psychological sciences and psychometrics. Alternatives to the scale were graded to the answer, namely three alternatives. (applies to me, applies to me sometimes, never applies to me) The correction switch (1,2,3) respectively and all the paragraphs towards the scale and there are no reversing paragraphs, as the scale is from (17) Paragraph divided into six areas (mutual communication, mutual understanding, mutual trust, mutual effect, mutual commitment, mutual conflict) The measure was applied to a sample of 301 teachers and a secondary school in Babylon. (111) Males and (190) females selected by the random caste method of proportionate distribution from the native society and after statistical analysis of the data using the statistical package of social sciences (spss)) The following result was: high school teachers have a good degree of cognitive sharing.

Chapter I

Introduction to Research

Iraqi educational institutions must keep abreast of scientific development and support the pedagogical professor so that he can see what is new and communicate effectively with all communities both inside and outside the school. Kyrgyzstan, 2021:2 (Despite this, the main challenge for educational institutions remains the fact that people are generally unwilling to share their knowledge and information only when they realize that the benefits will be more than the costs they will bear. and, to that end, factors or components that stimulate cognitive sharing and enhance individuals' motivation for cognitive sharing and participation must be provided (Yi, 2005:4).

Al-Balawi, 2019, explained that the process of cognitive sharing is faced with many challenges and constraints affecting cognitive sharing behaviors despite efforts in the field of performance development in educational institutions. In this context, some interested in educational education issues highlight many organizational and personal disadvantages in the current situation of educational institutions, which indicate the weakness of cognitive sharing, including: individuality and isolationism, the absence of organized collective action, and the overrepresentation of specialization at the expense of the unity and integration of knowledge, which resulted in the depletion of scientific disciplines and impeded the establishment of dialogue between them within the framework of the principle of the unity and integration of knowledge (Al-Balawi, 2019:78) As shown (Al-Badri, and Shame F, 2013) who indicated that there was a clear variation in the level of participation between the study's axes, cognitive sharing came at a very low proportion in the following axes (Participation of knowledge in

scientific communication, scientific full-time, scientific shops and scientific complexes (due to the obstacles mentioned by the secretaries of scientific councils in the absence of a clear and explicit system that determines the importance, type and sharing of knowledge that can be exchanged between the secretaries of government scientific councils and that need personal jurisprudence by the President of the Scientific Council), 2019:564

(Al mghaide) mentioned a number of problems affecting cognitive sharing in educational institutions, including the weak incentives to participate in activities, the high burden placed on school faculty, and the lack of adequate and equipped places within the school to communicate with members within the school. Nutritionist, 2010:565. Cognitive sharing is based on the diverse motivations of faculty members. If there are no members with different culture and they do not have the ability to demonstrate knowledge experiences to share with each other, it will be worthless to know and become rigid knowledge.) Andriessen,2006, 3

(Kim, 2008) explained that many people who work in educational institutions tend to work individually because he believes or perceives that his knowledge and experience actually constitute his only source of strength in educational attainment and teaching, so he likes to keep it to himself and not share it, rather than exchange public opinions towards the desired goals and objectives. (kim, 2008, 282) To ensure the effectiveness of the process of cognitive sharing among faculty members, it requires the formation of a team of mutual trust among members, characterized by effective communication as a result of feedback and the ability of members to easily exchange ideas among themselves (Obaidat, 2014:129).

One of the things that limits cognitive sharing among individuals within the group is the individual's desire to retain knowledge and the fear of sharing it with others to preserve gains, as well as the sharing of knowledge may be wrong and exposing the institution and others to harm, as well as the reluctance of individuals to involve others from knowing when they feel there is no benefit or reward awaiting them (husman, 1999) and (coakes et Goodman,2003). The most impediments to cognitive sharing are the lack of rewards and appreciation, time constraints and lack of formal and informal activities to instill a culture that shares knowledge. All mention obstructs or weakens the process of interpersonal cognitive sharing (poh Yen,2007).

Also undermining the process of knowledge sharing is a clear digital divide between the world's developed and developing countries, including the Arab States. In addition, there is a weakness in the contribution of educational institutions in a manner consistent with the shift towards the knowledge society because of the lack of prior scientific plans in the field of dissemination of knowledge, Weak cooperation or partnership between schools and private sector institutions in knowledge and Homa has had a negative impact on institutions' contribution in a manner consistent with the shift towards the knowledge society (Al-Zabiani, 2010).

The importance of research

Our current age is characterized by the evolution of different scientific and scientific applied aspects, so naturally this age has a platform for complex relationships, Since the age we live in is characterized by rapid changes, this requires having a lot of information and knowledge tools to keep up with this constant change. And then you have to share and communicate cognitively, because it's not enough for an individual to have a lot of information and facts. Because individuals differ in their level of logical and mental thinking, they need to share their knowledge and information in order to overcome the difficulties they face in their lives. (Strange, 2004:50) ، and There are a number of reasons why knowledge can change

societies in their entirety and at various levels and fields. No renaissance of any kind can be done without knowledge (Ghazali, 2016:104)

Cognitive sharing is this less technology-focused knowledge management in institutions and is more relevant to relationships between co-workers, which promotes information exchange and learning, and as educational institutions are based primarily on learning and innovation, knowledge sharing is a necessary practice for achieving the desired goals (Mc Inerneyet Mohr,2007)

The concept of cognitive sharing is one of the most important pioneering philosophical and intellectual concepts that have captured the broad interest of researchers. Since the early 1990s, researchers have been conducting their studies on knowledge management and how to apply cognitive sharing mechanisms in different environments. This all comes in pursuit of greater efficiency and creativity from these organizations in the light of a world of changes and challenges (Zubaidi, 2017:112)

Facilitating the transfer and sharing of explicit knowledge between individuals is done through the exchange of knowledge. This occurs when the individual is willing to help, as well as when he is willing to learn from others to develop new skills. The exchange of knowledge between individuals enables them to enhance their competencies and develop their knowledge (Mullah and Muhsin, 2015:154).

In Yi,2005 's view, to do most of the work well, this requires a collaborative effort. And if individuals try to work alone, they are likely to fail, while their openness with colleagues and sharing their knowledge with them will undoubtedly support the achievement of goals. In other words, cognitive sharing with others benefits the individual and others who will share their knowledge similarly, Moreover, an individual can feel some kind of satisfaction and gain self-esteem if they see the benefits others will bring by exchanging their knowledge. And the teacher might help his colleague get things done better and faster, More efficiently, hence cognitive sharing allows individuals to solve problems more quickly, Reduce costly duplication of effort and find innovative solutions through cooperation (Yi,2005:21)

cognitive sharing is one of the important strategies that institutions have focused on in recent years. It is intended to search for knowledge in their places of existence. Individuals and groups share the knowledge stored in their places. It is an important process to support innovation and development. It is also very important to support the performance of institutions and develop the knowledge of individuals implicit and phenomenon by sharing knowledge among themselves (Ali, 2013:86)

Search Limits
The current research is determined by male and female secondary teachers present in the government schools of the directorates of the Babylon Governorate Centre for the academic year (2021_2022)

Definition of the Research
The researcher's current research variable explains the following:
Cognitive sharing
❖   *(low & Ngai2008):* is the process of transforming knowledge (skills, experience, concepts) from one individual to another Law & Ngai, 2008,2343)
❖   *(Shaheen 2017)* is the circulation and exchange of different types of knowledge

between individuals and interaction in dialogues with others inside and outside the organization, ensuring cooperation between them to form new mental thoughts (Shaheen, 2017:22).

❖ *Procedural definition:* (The respondent's overall degree of response on the cognitive sharing scale)

Chapter II

Conceptual framework

The theoretical and intellectual frameworks and data needed to be recognized in the exchange of ideas, experiences and skills among the team members in order to develop knowledge and increase organization as an efficient and effective beehive, in order to identify cognitive sharing as intangible assets through which organizations can achieve creativity and excellence in the context of continuous development.

The views of researchers and thinkers at the Administrative and Behavioural Sciences Ceremony diverged on the first references to the emergence of cognitive sharing. Indeed, interest in cognitive sharing is not born today. The first beginnings of interest in sharing and transmitting knowledge may be due to writings (1983, (Roge technological innovations and transfers of Salleh etal, 2011:104).

Cognitive sharing is also a process between individuals who share common interests or face similar problems. Or it brings them together as a legitimate target, and it's not just sharing explicit or advertised knowledge. It also involves the sharing of inherent knowledge in human minds, as cognitive activity expresses an activity to flow knowledge from one person who owns it to another person or group that needs it in an understandable and usable way. It also means that the sender does not give up his ownership of knowledge instead the property becomes shared between the sender and the future. Cognitive sharing is a dynamic process where individuals learn and interact constantly to achieve creativity and innovation (Al-Hadrami, 2017:2)

Knowledge sharing is the cornerstone of building educational institutions and developing human resources in sectors in general and educational institutions in particular knowledge ", where it promotes knowledge storage in others through knowledge-based interactions that transfer and share information and knowledge among others, cognitive sharing disseminates the implicit and explicit knowledge of faculty-based educational institutions to ensure their effective development (Ozbebek.2001:71).

Theories of cognitive sharing
Theory of Social Exchange

Social exchange theory emerged at the end of the 1950s (1959) when social exchange pioneer Harold Kelley and John Thibaut published their book, Social Psychology of Groups, which laid out the basic principles of exchange and the intellectual premises from which the theory proceeds. This theory has been a reaction to functional structural theories, and it does not apply in its interpretations of social phenomena of structural attitudes and functional factors related to the parts of social construction and its functions. Rather, its interpretations are based on interactive bases between the members of the community in apparent and implicit information that obliges the exchange in taking and giving, whichever party takes, and which other party gives. This theory is one of the most important models of personal interaction in social psychology, indicating that both personal interactions require both behaviour, influence,

production, and communication, as well as concern with cost and intangible benefit, which each party can obtain such as: Respect, care, friendship, etc. The theory of social exchange differs from the theory of economic exchange in that the first does not include returns on cost investment, as there are no rules or conventions in this theory, and the only guarantee in it is to assume the intentions of cooperation from each party. This theory is interpreted in the interpretation of cognitive sharing behaviour as:

- ✓ First. Series of exchanges.
- ✓ Second. Each party seeks to reduce the cost of sharing knowledge and aspires to maximize its returns (effort, time and loss of knowledge).
- ✓ Third. The success of the cognitive sharing process depends on the willingness to share each party's knowledge and intentions (Lin et al, 2003, p320-321).

One such auxiliary explanation, called the social exchange criterion, indicates that individuals' interactions are directed by social material, since not only do we exchange material goods and money, but we also exchange information. Mutual normative principles include two ethical principles:

- ❖ Obliging individuals to help others.
- ❖ Morally and morally oblige individuals not to harm parties who have given them grants and prior assistance.

There are three factors according to the theory of social exchange that have an indirect effect on cognitive sharing: mutual connection, understanding, and trust. While there are other direct factors that have a direct impact on cognitive sharing behavior such as mutual feedback, mutual commitment, and collision. (Aliakbar et al, 2012 :212)

Factors with indirect effect lie in
1) Mutual contact is the degree to which members of one group communicate successfully with the other.
2) Mutual understanding is the degree to which a member of a group is well known as one's partner with another.
3) Mutual trust is the degree to which each member trusts other members.

Factors with direct effect lie in: -
1) Mutual influence is the degree to which members of the group are able to carry out missions to one another.
2) Mutual commitment is the degree to which members of one group adhere to one another within the group.
3) Mutual conflict is the degree to which team members interact when they divide the community (Wu & Lin, 2006, p6).

This theory also aims to understand the factors that support the participation or return of information in technically advanced organizations. According to et al (1994) constantvan information sharing is influenced by rational subjectivity as well as interest in the organizational social context, they suggest that "culture, organizational contexts as well as personal factors can influence people's attitudes in sharing information"، The more a person believes that sharing information is "normal, correct and socially foreseeable behaviour in the workplace", the more they are willing to participate. So the more interdependent a person works with others, the greater the needs of self-interest and reciprocity, and thus the greater the likelihood of a person participating (Staples & Jarvenpaa, 2000, p. 131).

As information access technology improves, people have more opportunities to

exchange information as the theory of information exchange has been developed. Although Thibaut & Kelley has not explicitly addressed the topic of information exchange, we can extend the analysis to this area (Constant et al., 1994, p. 402).

The exchange of information is based on the concepts of interdependence of the theory of social exchange. The original view of social exchange did not take into account the exchange of information, but some studies based the theory on this new context on the assumption that people treat sharing information such as other exchanges influenced by their social and organizational context, and the context is important because it distinguishes between sharing information on such simple exchanges as individuals simply act from rational self-interest. The concept of interdependence in social exchange theory means that the organizational context causes it to rise above the rational motives of their own interests to consider the long-term effects of their effectiveness, i.e. the organizational context regulates the exchange of information through people's fears of maintaining future relationships, power balance, image, etc. The stronger the impact of the social and organizational context, the more strictly driven people's behaviour is by the task or personal determinants of sharing information. (Staples, Jarvenpaa, 2000:132).

Chapter III

Research methodology and procedures
I. Research curriculum

The current research curriculum is a descriptive and correlative approach, since its aim is to determine whether there is an association between research variables. The purpose of the correlative research is to determine the existence of a relationship (or lack of correlation) between the variables under study and the use of correlative relationships in the work of predictions (Melhem, 2000:384). Researchers in the humanities and social sciences use it to ascertain the extent of the correlation between the two variables by using correlative methods between the variables of the phenomenon (Ismail, 2002:16)

Second: Research Community

The search community is intended for any known gathering of persons, objects or accidents, and represents the overall total from which samples are selected (Carpenter, 2010: 149). For the current research community, it consists of secondary school teachers in the province of Babylon for the academic year (2021-2022) by 58 secondary schools. In order to obtain the necessary data on the research community, the researcher reviewed the Directorate of Educational Planning and the Statistics Division of the General Directorate of Education of the Province of Babylon under the mission facilitation book issued by the Faculty of Education of the University of Babylon to the General Directorate of Education torate of the province ate of Babylon. According to the data obtained, the research community was determined to be 1.288 teachers and secondary schools, 511 males (37%) and 877 females (63%).

Research samples

They are part of the original community and are withdrawn in an appropriate methodological manner (Harris, 2003, 45).

In view of the fact that the variables to be studied in the present research are divided into layers, each reflecting a category of the levels of the variable in question, the researcher has chosen a random caste sample with a proportionate distribution. In order to adopt this method of samples, the following steps must be followed:

❖ Divide members of society into two classes (female - male) of the original society.
❖ Determine the number of members of the community belonging to each class.

Determine the total sample size and sample size of each group, and its proportion of the total community of research actions (Thompson, 2012, 39).

The search sample was composed of 301 teachers and schools in the light of Steffen's equation (Steven,2012:75), while a number of males (111) and females (190) were shown in table (1).

Table (1) *Sample Research Disaggregated by Sex*

Percentage	N.O	Gender	School name
%7	20	Male	1. Al Hillah High School
%13	40	Male	2. Babylon High School
%10	31	Male	3. Dhi Qar High School
%7	20	Male	4. Al dustoor High School
%10	30	Female	5. Hilla High School
%17	50	Female	6. Al tahrir High School
%17	50	Female	7. Al-Janainah High School
%10	32	Female	8. Palestine High School
%9	28	Female	9-Nujoom High School
%100	301		Total

Fourth: Research tools
Cognitive Sharing Scale

After familiarizing the researcher with the literature and previous studies regarding the first variable, cognitive sharing was adopted. (Mehdi _ 2021) for cognitive and constructive sharing in light of the theory of social exchange (Harold Kelley 5919) (It is defined as "the degree to which members of the community participate in visible, implicit, take-and-give information", consisting of (17) paragraph (positions) for each position three alternatives (always applicable to it, sometimes, not applicable) (4) mutual contact paragraphs, (2) paragraphs of mutual understanding, (2) paragraphs of mutual trust, (4) paragraphs of mutual effect, (2) paragraphs of mutual obligation, (3) paragraphs of mutual conflict and concepts of areas identified

1) Mutual contact: the degree to which members of the group communicate successfully with the other.
2) Mutual understanding: The degree to which a member of the group knows a good partner is one with the other
3) Mutual trust: the degree to which each member trusts other members
4) Mutual effect: the degree to which members of the group are able to influence the execution of one another's missions
5) Mutual obligation: the degree to which members of the group adhere to one another within the group
6) Mutual conflict: the degree to which it reacts when there is division in the group (Mahdi 96,2021)

For the purpose of ascertaining the validity of the measure for which it was placed, the researcher made the following steps:
The validity of the paragraphs

To ascertain the validity of the paragraphs of the scale used in this research, they were

presented in their initial form to a group of arbitrators specializing in pedagogical and psychological sciences, numbering 30 arbitrators (supplement) to clarify their opinion on the correctness and accuracy of the wording of the paragraphs of the scale and are they appropriate to measure what they were designed for? As well as its suitability for the sample of research, this is a method used to ascertain the extent to which its paragraphs represent aspects of the variable that should be measured (Abdul Rahman, 2003: 185), having expressed their views on all paragraphs of the scale in terms of its validity and relevance to the nature of the sample, using the Kai box and all paragraphs valid, and having made the arbitrators' proposed adjustments to certain test paragraphs (supplement) as shown in table(2)

Arbitrators' agreement on the validity of cognitive sharing scale paragraphs using Kai box and percentage

Indication		Ka ^{2} value		Agreement percentage	N.O arbitrators		Paragraphs	Field
		Tabular	Calculated		Disagree	Agree		
0.05	3.84		30	%100	Null	30	(1,2,3,4	Cognitive communication
			30	%100	Null	30	(5,6)	Mutual understanding
(7,8,9)	Mutual trust		30	%100	Null	30	(7,8,9)	Mutual trust
) (10,11,12	Mutual effect		30	%100	Null	30	(10,11,12)	Mutual effect
(13,14)	Mutual obligations		30	%100	Null	30	(13,14)	Mutual obligations
(15,16,17)	Mutual conflict		30	%100	Null	30	(15,16,17)	Mutual conflict

clarity of the scale paragraphs and instructions

To ascertain the clarity of the paragraphs of the scale in terms of formulation, meaning and validity of alternatives, and to know the difficulties that individuals may encounter when responding to the paragraphs of the scale in order to avoid them before they are finalized to the individuals of the sample and to determine the period of time that the respondent needs to answer all the paragraphs of the scale, the scale was presented to a survey sample of (60) Teacher and secondary school in Babylon governorate randomly selected from the schools covered by the research and the average time taken in the answer (10) minutes as shown in the table

Statistical analysis of paragraphs

The statistical analysis of the paragraphs helps to examine the ability of each paragraph among the individuals of the sample and to decide whether to modify, delete, examine or maintain it. The stability of the test scores and the veracity of the interpretation of the results depends on the quality of the test paragraphs and thus will help to improve the quality of the test metrics (Reynolds, Linfgestone, 300:2013).

The discriminatory force of the paragraphs

the discriminatory force of the test paragraphs was extracted in the following way:

The Two-Party Groups method

The main objective of the calculation of the discriminatory force of the paragraphs is to exclude paragraphs that do not distinguish between examiners and to maintain those that

discriminate between them (Ebl & Frisbie, 2009:294) and according to Kelley,1957, 27% is the best rate for determining the number of members of the upper and lower groups in large samples with normal distribution (Enstasi, Boren, 2015,344). In order to do this, the researcher did the following:

❖ Correction of all questionnaires for research sample individuals of 400 forms.
❖ Calculation of the total degree of each questionnaire.
❖ Regularization of questionnaires according to the degree of total found.
❖ Calculate the percentage (27%) of the highest-graded questionnaires

Standard Characteristics of a Scale of Cognitive Sharing
Honesty

Honesty verified for the metric of borrowed hope by:

virtual honesty

This was achieved when the preliminary paragraphs of the scale, its instructions and its alternatives were presented to a group of judges specializing in educational and psychological sciences and psychometrics who agreed on the validity of the scale's paragraphs, instructions and alternatives.

Construction sincerity

The researcher verified the construction sincerity through two indicators:
❖ calculation of the discriminatory force of the scale is an indicator of the construction's sincerity.
❖ the internal consistency that the researcher has achieved by calculating the degree coefficient of each paragraph to the overall degree of the scale and its relationship with each paragraph to the field and the relationship of the field to the other.

Scale Stability

The researcher followed two ways to find a scale stability factor:

1) Retest Method

This method shows the stability of results when the test is applied to a sample of individuals more than once over a specified period of time, and the metrics have been applied and then re-applied to (60) Teacher and school, the period between the first and second application (15) Today, in the view of Adams & Torgerson, the reapplication of the scale to recognize its consistency does not exceed two weeks from the first application and has reached the constant of the scale (0.81), and after this consistency is appropriate if compared with the standard established by the literature on psychometric measurement

2) The faKronbach Constant Factor:

The internal consistency coefficient was extracted using the Alfa Kronbach formula. All of the examiners' forms were tested on the statistical analysis sample of 400 and then used the Alfa equation with a constant value of 0.87.

Chapter IV

Presentation and discussion of results

This chapter contains a presentation of the findings reached in accordance with the objectives of the research, their interpretation and discussion in the light of the adopted theoretical framework and previous studies, and a number of conclusions, recommendations

and proposals.

I. Presentation and discussion of results
First objective
Cognitive Sharing Recognition

To recognize this goal, the cognitive sharing scale was applied to the adult research sample (400), and it turns out that the computational average of grades was (40.08) degrees and with standard deviations of the amount of (3.25) degrees While the hypothetical average of the scale (34) degrees in order to identify the significance of the statistical difference between them, the T test was used for one sample (One Sample T Test) and a statistically different D was found between them where the calculated T value was (37.36) which is greater than the tabular value of (1,96) at an indicative level (0.05) and degree of freedom (399) indicating that the study sample has a good degree of cognitive sharing and the table shows this

Table (3) *Computational Average, Standard Deviation, Hypothetical Medium and Values (T) Cognitive Sharing*

Indication level	T value		Hypothetical mean	Standard deviation	SMA	Degree of freedom	Sample
	Tabular	Calculated					
Significant	1,96	37.36	34	3.25	40.08	399	400

This study is consistent with the findings (Zubaidi, 2017) and the study (Hamdani, 2018) that found that cognitive sharing exists among university professors, and differs with the study (Hadrami, 2017) that sees impediments to cognitive sharing among faculty members. This result can be explained by the theory of social exchange from the fact that everyone tries to share knowledge with others with a view to reducing time, effort and affordability, as well as people knowing that sharing knowledge will lead to the development of work and the development of their own abilities. Technological progress and the development of electronic means of communication have also helped to increase cognitive sharing. The policy pursued by organizations where individuals work also helps to increase sharing and sharing of experiences. The more a person believes that sharing information is "normal, correct and socially foreseeable behaviour in the workplace" the more they are willing to participate. Since a person's work is more interdependent with others, the needs of self-interest and treatment have increased, as has the likelihood of a person participating. The researcher explains this finding, that social relations are a channel that facilitates the process of cognitive sharing, it offers more effectiveness to the communication process and accelerates the process of interaction, and it creates a sense among teachers of the need to share their thoughts as a result of the satisfaction he feels towards them. This leads them to the behavior of sharing knowledge.

Conclusions

❖ Teachers and teachers have a good degree of cognitive sharing

Recommendations

❖ Engage new teachers Porsche brainstorming and exchange ideas with high school experienced
❖ Raise awareness among the educational institution of the need to pay attention to the renewal and development of the permanent and bring them into a coherent structure

with the expertise and knowledge holders.

❖ Establishing reward programs and incentives, through which teaching is rewarded for his performance, and his interest in sharing knowledge with colleagues and providing solutions and individual and collective proposals.

❖ The holding of periodic panel discussions through which various determinants, constraints and problems are raised and participants share their insights into them in order to find more realistic and appropriate solutions to the possibilities of educational institutions

Proposals

❖ Conduct a study aimed at identifying the nature of differences between males and females in cognitive sharing among different age groups such as school students and university students.

❖ Conduct a study on cognitive sharing and its relationship to the social status of faculty members

❖ Conduct a study on cognitive sharing and its relationship to social communication

❖ Conducting a study on cognitive sharing and its relationship to the target orientation of schoolchildren.

References

1) Al-Balawi, Salma Mahmoud (2019): The degree of cognitive sharing among faculty members and its relationship to organizational culture at the universities of Tabuk and King Saud, to obtain a master's degree.

2) Gargul, Ali Jawad (2021): Communicational intelligence and cognitive flexibility and their relationship to cognitive sharing among faculty members at the University of Baghdad, published doctoral thesis.

3) Al-Magidi, Al-Hassan bin Muhammad (2010) Obstacles to educational research at King Khalid University in the Kingdom of Saudi Arabia. A field studies. The Tenth Scientific Conference of the College of Education. Educational Research in the Arab World: Future Visions. Fayoum, Egypt

4) Obeidat, Sarah (2014): The Impact of cognitive Sharing on Developing Collective Competencies, Journal of Algerian Institutions Performance, Sixth Issue, Algeria

5) Ghazali, Adel (2016): The role of knowledge management in raising the performance of the Algerian industrial organization, Faculty of Humanities and Social Sciences, University of Mohamed Lamine Debaghin Setif, published doctoral thesis.

6) Gharib, Abdel-Rahman (2004): Managing with Knowledge: Changing what cannot be changed. Professional Management Experience Center "PMIC", Cairo.

7) Al-Zubaidi, Sahar Anawi Rhyo (2017): cognitive sharing and its relationship to creative behavior, Al-Qadisiyah Journal of Administrative and Economic Sciences, Volume 19, Issue 2.

8) Mulla, Abdel-Rahman Mustafa, Mohsen, and Wissam Yassin. (2015). The requirements for sharing knowledge to enhance audit quality control in the Federal

Office of Financial Supervision: field research. Journal of Economic and Administrative Sciences, 21 (86) 138-172.

9) Ali, Osama Mohamed Sayed (2013): Knowledge Management, Egypt, Dar Al-Ilm wa Al-Iman for Publishing and Distribution

10) Anastasia, Anna, Yurin, Susan. (2015). Psychometrics, translated by Salah Al-Din Mahmoud Allam, Dar Al-Shorouk for Publishing and Distribution, Amman - Jordan.

11) Abdel-Rahman, Saad (2003): Psychometrics (theory and practice), Dar Al-Fikr Al-Arabi, Egypt.

12) Najjar, Nabil Jumaa Saleh (2010): Measurement and Evaluation: An Applied Perspective with SPSS Program Applications, Dar Al-Hamid for Publishing and Distribution, Amman, Jordan.

13) Baldawi, Abdel Hamid Abdel Majid (2008): Applied Statistical Methods, Dar Al-Shorouk for Publishing and Distribution, Amman, Jordan.

14) Yi, Jialin (2005). A measure of cognitive sharing behaviour: scale development and validation. Unpublished master's thesis, lndiana University, USA.

15) Kim, s.and ju, B (2008). An Analysis of Faculty Perceptions Attitudes toward cognitive Sharing and Collaboration in an Academic Institution. Library and Information Science Research. Vol.3. No.2. PP.

16) Kelly E.L (1995), Consistency of the adult personality. American psychologist, No.10

17) Harris, R. J. (2003). Traditional nomothetic approaches. Handbook of research methods in experimental psychology, 41-65.

18) Staples. S. L., Jarvenpaa. D. S. (2000): The use of collaborative electronic media for information sharing; an exploratory study of determinants, journal of Strategic information systems, 9 (2,3): 129-154.

19) Ozbebek, A. and Toplu, E.K (2011). Empowered Employees cognitive Sharing. International of Business and Management Studies. Vol. 3. No. PP. 69-7