Orientation towards knowledge management applications in service organizations: From the Comparative study point of view of telecom operators' managers in Algeria

التوجه نحو تطبيقات إدارة المعرفة في المنظمات الخدمية: من وجهة نظر مديري مشغلي الاتصالات في الجزائر دراسة مقارنة

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Abstract:

This study aims to measure the differences in Knowledge management indicators between telecom operators in Algeria. On the basis of three approaches; the descriptive, inductive and comparative approach. We tried to answer the main question and carry out the empirical study. We applied on sample of 67 agencies and use some short interviews with managers, as well as some reports about telecoms market published by ARPCE. To test the hypothesis, we use the one-way ANOVA test. Finally, we have found that there are no significant differences between telecom operators in developing the Knowledge management indicators.

Keywords: Knowledge management; Knowledge creation; Knowledge sharing; Knowledge utilization; Business intelligence.

الملخص:

نهدف من خلال هذه الدراسة إلى قياس مدى وجود فروقات في مؤشرات إدارة المعرفة بين متعاملي الهاتف النقال في الجزائر. بالاستناد على ثلاثة مداخل رئيسية من أجل الإجابة على الإشكالية المطروحة، بالاعتماد على المنهج الوصفي والاستقرائي والمقارن، تم جمع البيانات بالاعتماد على أسلوب الاستبيان، موجه لعينة عشوائية متكونة من 67 وكالة تجارية وبعض المقابلات القصيرة مع مديري متعاملي الهاتف النقال في الجزائر، وكذلك بعض التقارير حول سوق الاتصالات في الجزائر المنشورة من طرف ARPCE. لنتوصل في الأخير إلى أنه لا توجد فروقات ذات دلالة إحصائية بين متعاملي الهاتف النقال في الجزائر تخص مؤشرات إدارة المعرفة.

الكلمات المفتاحية: إدارة المعرفة؛ خلق المعرفة ؛ مشاركة المعرفة ؛ إستخدام المعرفة؛ ذكاء الأعمال.

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1. INTRODUCTION:

The future of business organizations today depends on the extent of awareness and optimum investment in their resources to increase and try to provide their products and services in a way. Since survival and excellence were among their competitive capabilities, the strategic objectives of any organization began to focus on intellectual assets as a basic investment in the prosperity and progress of organizations. Which necessitated that there should be procedures for the acquisition of tangible and intangible resources, and the development of human elements, as they are the ones who manage the various resources of organizations. With the rapid development in the business world, knowledge management has emerged as one of the modern topics that have become of great interest and have many different applications. Rather, it has become one of the assets that organizations seek to own and develop.

Knowledge management is one of the most important features that distinguishes the organization from others, as knowledge management effectively affects the organizational performance at all administrative levels, and its impact extends on the nature of production and on services, which means an impact on the quality of goods and services, and consequently, an impact on customer satisfaction, who is the main factor to success of all kinds of business.

The power of knowledge this is how the world has become today and this is how global societies have focused on the production and management of knowledge, more than on capital and the magnitude of production means, which led to the emergence of a new economy known as the digital economy. Among these systems is knowledge management.

Knowledge management has provided many opportunities for organizations in advanced societies to achieve competitive progress through the business intelligence of technology, production approaches and new methods of work that have contributed to reducing costs and increasing profits.

From the foregoing, we can ask the following question: If knowledge management is inevitable for the telecoms sector in Algeria due to its free competition in accordance with regulations, do telecom operators in Algeria tend to adopt knowledge management indicators and are there differences between them stemming from the positioning and philosophy of each operator?

2. Literature review

2.1. Knowledge management

Although the wide range of research on knowledge management, there appears to be no global definition of the word, just as there is no assent on what it makes up. According to (Suresh, Olayinka, Chinyio, & Renukappa, 2016), the different definitions of knowledge may be abstracted and categorized into: Classical age definitions of knowledge, as good reason for true belief and of knowledge contemporary definitions, as experiences mixture, information and values Thus, knowledge management means understanding the using of knowledge to successfully deal with applied tasks that involve knowledge-based policies and activities. The literature acknowledges that the transfer of knowledge through interfaces between tacit and explicit knowledge (Reich, Gemino, & Sauer, 2012) is a dominant aspect of knowledge management.

2.2.Definition of knowledge management

There are several approaches to the notion of knowledge, as it is a complex and conclude term. Indeed, the definition of knowledge is a subject of ongoing debate between philosophers in the epistemology field. One of the widely accepted definitions of knowledge is that: the knowledge is a dynamic human asset for justifying personal beliefs in order to obtain truth. It may then be asserted that knowledge is an intangible resource or invisible, the acquisition of which includes complex cognitive processes of perceiving, learning, communicating, relating and thinking (Epetimehin &

Ekundayo, 2011). Knowledge is the notion, skill, vision and experience, that supply a framework for creation, evaluation, utilize and developing information (Soltani & Navimipour, 2016)

2.3. Knowledge Management Processes:

Knowledge management processes are defined as procedures related to the creating, acquisition, storing, share, and use of knowledge to improve the performance of employees. (Barley, Treem, & Kuhn, 2018). Furthermore, Knowledge management enablers are aware of all those aspects that ultimately influence the radical growth of Knowledge management operations (Naqshbandi & Jasimuddin, 2018). Several previous studies demonstrated the separate or concurrent positive influence of knowledge management enablers and processes on the KS attitude of teachers of university (Sahibzada, Cai, Latif, & Shafait, 2020).

Evaluation of the current literature on knowledge management processes in business organizations helped to identify significant gaps that need to be filled. Given the knowledge importance in organizations, and in context of the contemporary of high inter-organizational competitiveness, Knowledge management and organizational learning culture are core concepts in both academic and managerial settings (Schmitz, Rebelo, Gracia, & Tomas, 2014). Subsequently, in the case of business organizations, it promotes research cooperation of academics (Tan & Noor, 2013). The use of knowledge is a mixture of technical, operational and social aspects (Pasha & Pasha, 2012) .It is the Implementation of knowledge to organizational processes and operations to produce valuable products and services (Iqbal, Latif, Marimon, & Sahibzada, 2019).

2.4. Knowledge creation

Creating Knowledge involves all the processes over which the organizations require to produce and acquire knowledge, alike it is among tacit knowledge and explicit knowledge. The interaction among tacit knowledge and explicit knowledge is created through new knowledge. It was created within the organization to secure different types of knowledge for the benefit of future decisions (Abualoush, Masa'deh, & Bataineh, 2018) The generation of knowledge is a path by which generated the new knowledge over the four sub-processes of the theory of continuous knowledge generation (Al-Tit, 2016). The generation of knowledge involves socialization; converting tacit knowledge into new tacit knowledge like the exchange of experiences between the organization employees. Justification is the conversion of tacit knowledge into explicit knowledge such as documentation of members' past experiences (Baldé, M, Ferreira, & Maynard, 2018).

2.5. Knowledge sharing

Sharing Knowledge is the most important factors of effective the knowledge management in order to it covers divergence that cannot be carried out from other knowledge management path, and is essential for the proper use and use of knowledge resources, as well as having a direct impact on other knowledge path such as knowledge generation and integration (Masa'deh, Obeidat, & Tarhini, 2016), the knowledge-sharing process takes place through people sharing tacit and explicit knowledge that generates new knowledge (Hsiao, Chen, & Chang, 2011). Knowledge sharing is considered as the organization's processes and methods for disseminating and transferring knowledge between employees for its use and development to generate new knowledge (Obeidat, Abualoush, & Irtaimeh, 2018). Knowledge is unimportant without employees' participation and access to it, and it cannot be developed or generated without active knowledge sharing, so staying in the minds of employees will not improve without the participation of others and increase but on the contrary be subject to loss. There are several methods and tools for sharing the knowledge such as informal meetings, training, best practices, knowledge regulation, e-communication tools, and culture of organization (Obeidat B. Y., 2016).

2.6. Knowledge utilization

The effective utilization of knowledge and its efficient use is to ensure the achievement of the organization's goals effectively and efficiently, and this requires delegating broad powers and giving suitable freedom to utilization the knowledge, the organization must apply the actual knowledge of its own activities and benefit from it after storing and developing methods to use and implement it (Bouraghda & Dris, 2015). The utilization of knowledge is practiced over the use of this knowledge and its use in real work. Storage and sharing are not enough; the importance is in converting this knowledge into functional applications. The success of each organization in its program of knowledge management based on the amount of knowledge used in connection to stores (Shujahat, Sousa, Hussain, & Nawaz, 2019). The knowledge must be used to solve and deal with the organization problems. It is the main objective of the knowledge management procedure by recruiting them in organizational strategies and activities and procedure like human resource management, goods and services quality (Sweis, Fallaq, Buqjati, & Abu, 2011).

2.7.Business Intelligence

Business intelligence is applications and techniques to collect, access and analyze large amounts of data to organizations to make an effective decisions (Wang & Wang, 2008). Business Intelligence is a easily available tool that ability of collection, storage and processing the information. Therefore, the main role of business intelligence tools in effectively managing information is to help management improve access to accurate information when needed (Farzaneh, Isaai, Arasti, & Mehralian, 2018).

The business intelligence systems may supply strategic management and stakeholders with a whole view of the organization, consequently providing benefits like the capability to make quicker, more accurate and reliable decision. Business intelligence can be defined as a combination of processes, methodologies, computer tools and techniques that manipulate data in information with the cumulative experience of knowledge, and the cumulative knowledge of intelligence so that departments can make decisions on different level.

Business intelligence also is an integrated approach operational process performance, for reach main objectives over timely interaction and gateway to data, and its qualification to give managers with the requested analysis that analysis historical and present data and compares it to previous time periods (Turban, Sharda, Aronson, & King, 2008). Features of business intelligence, if properly implemented, integrated and up-to-date the information, timely information provision, high quality information, improved support for achieves the strategic and organizational goals, and improves organizational performance (Holsapple, Lee-Post, & Pakath, 2014).

Business intelligence use to collecting data from inside and outside the organization, to gather information, to find out remarkable hidden patterns among heterogeneous data from several sources inside and outside the organization, and to convert them into the desired knowledge to make higher-quality and precise decisions (Teoh, Rajendran, & Lim, 2014), The great sophistication of the business environment and the flexible structure of business intelligence make its technical items not limited to a certain number and include items like data warehouses, data analysis tools, user interface and dashboard (Turban E. S., 2011) .

2.8. Knowledge management: process and organization performance

The efficiency of knowledge management and its role in organizational performance is a big challenge for couple of organizations, and what determines the efficiency of knowledge

management in organizations is the returns or results of using knowledge management (Jyoti & Rani, 2017). The knowledge that an organization possesses is usually considered a vital factor in its levels of performance (Yadav, 2013). Knowledge as a resource has gained the organizations attention as one of the most important resources of the organization strategy, due to its impact on business intelligence and competitive advantage that leads the organization to height performance.

Knowledge management is gaining its importance over its processes and practices to reach positive trends in organizational context, enrich work and enhance productivity (Seleim & Khalil, 2011). Organizations understand that they must turn their attention to knowledge management processes; Create, convert, publish, share, store, select, and process to increase its performance. Knowledge sharing has become critical to the use of knowledge assets as appropriate, and the reason of this is that sharing knowledge may be considered an necessary part of the organization because knowledge that arises in organizations requires transmission and sharing in order to be known and comprehend (Mills & Smith, 2011), explicit and tacit knowledge is a primary resource for organizations to gain and maintain a high business and organizational performance also the competitive advantage as a strategic objective.

Knowledge sharing or integration brings together dispersed knowledge to enhance business intelligence and creativity. Many existing knowledge sharing practices like training and development programs, IT reports, systems, official documents, and cross-functional teams are all examples of knowledge integration by bringing together knowledge across a broad group or environment to enhance the products and services quality that increase response to customer needs, and enhance business intelligence ability, and to progress overall organizational performance (Wang, Wang, & Liang, 2014)

3. METHODS AND MATERIALS:

This study aims to measure the differences in Knowledge management indicators between telecom operators in Algeria. On the basis of three approaches; the descriptive, inductive and comparative approach, we tried to answer the main question and carry out the empirical study. For data collection, we use a questionnaire of sample of 67 agencies and some short interviews with managers, as well as some reports about telecoms market published by ARPCE. To test the hypothesis, we use the one-way ANOVA test. Finally, we have found that there are no significant differences between telecom operators in developing the Knowledge management indicators.

3.1. Hypotheses:

The main and sub-hypotheses of the study are presented as follows:

• H: There are differences in knowledge management indicators between telecom operators in Algeria.

- There are differences in Knowledge creation indicators between telecom operators in Algeria.
- There are differences in Knowledge sharing indicators between telecom operators in Algeria.
- There are differences in knowledge utilization indicators between telecom operators in Algeria.
- There are differences in business intelligence indicators between telecom operators in Algeria.

3.2. Objectives:

Our purpose through this study is to know the individual features of each operator in the telecoms sector in Algeria, about the indicators of Knowledge creation, Knowledge sharing, knowledge utilization, and Business intelligence.

Through the following sub-objectives

- Determining knowledge management indicators in the telecom sector
- Knowing the availability of knowledge management indicators in the telecom operators

- Detecting the differences in the knowledge management indicators of telecom operators

3.3. Population and sample:

The telecommunications market in Algeria is a dynamic market, thus understanding its structure helps identify the appropriate strategy in order to confront the challenges it faces. Given that the telecom sector in Algeria is one of the important fields, as it is one of the most successful Economic sectors due to its rapid development and growth, especially after reforms, which had a significant impact on competitiveness, quality and prices of services.

The population of this study is represented by the Manager's opinion of telecom operators in Algeria within their agencies and commercial spaces, which are estimated 338 units, and the sample represents 67 Manager from about 20% (338 Agencies in globally), i.e. 67 agencies and commercial spaces.

3.4.Data sources

For data collection, we use a questionnaire mainly and some short interviews with managers, as well as some reports about telecoms market published by ARPCE, also scientific journals, periodic, conferences and various scientific publications.

3.5. Approaches:

In this study we adopted three approaches, which are the descriptive, inductive and comparative approaches. By using one way ANOVA test.

4. RESULTS AND DISCUSSION:

4.1. Reliability:

The Reliability of the tool is intended to give this tool (questionnaire) the same result if it was redistributed more than once under the same conditions and in different context, or in other words, the Reliability of the tool means Reliability in its results and not to change it significantly if it is redistributed among the sample members several times during certain periods of time, the researchers test the reliability of the questionnaire using the Cronbach alpha method, as follows:

4.1.1. Cronbach's Alpha:

The researchers used the Cronbach alpha to measure the reliability of the questionnaire, and the results were as shown in the table below

Table 1: Results of the Cronbach alpha test

| | Field | | Cronbach's Alpha | | | |
|------|-----------------------|-------|------------------|------|------|-------|
| Code | Dimensions | N of | AT | WTA | OTA | N=67 |
| | Difficusions | Items | N=28 | N=17 | N=22 | IN-07 |
| X1 | Knowledge creation | 5 | .866 | ,891 | ,899 | ,880 |
| X2 | Knowledge sharing | 4 | ,834 | ,881 | .879 | ,861 |
| X3 | knowledge utilization | 3 | .888 | ,783 | ,804 | ,812 |
| X4 | Business intelligence | 3 | .898 | ,803 | ,864 | ,862 |
| X | Knowledge management | 15 | .866 | ,856 | ,861 | ,862 |

Prepared by the researchers based on the outputs of SPSS.V25

It is clear from the results shown in the above table that the value of the Cronbach Alpha coefficient is high for each dimension of the questionnaire. Also, the value of the alpha coefficient for all dimensions of the questionnaire was .902, which means that the reliability coefficient is high. Thus, the researcher has emphasized on the reliability of the questionnaire, which makes them confident of its reliability to achieve the results, analyze the data and test the hypotheses.

4.1.2. Guttman Split-Half Coefficient

The researcher used the Guttman Split-Half Coefficient to measure the reliability of the questionnaire as a second indicator, and the results were as shown in the following table:

Table 2: Results of the Guttman Split-Half test

| Code | Field | Guttman Split-Half Coefficient | | | | |
|------|-----------------------|--------------------------------|------------|-------------|-------------|------|
| | Dimensions | N of Items | AT N=28 | WTA N=17 | OTA N=22 | N=67 |
| X1 | Knowledge creation 5 | | ,866 | ,878 | ,885 | ,805 |
| X2 | Knowledge sharing | 4 | ,884 | ,869 | ,874 | ,881 |
| X3 | knowledge utilization | 3 | ,855 | ,880 | ,874 | ,869 |
| X4 | Business intelligence | 3 | ,770 | ,867 | ,806 | ,905 |
| X | Knowledge management | 15 | ,855 | ,871 | ,856 | ,861 |

Prepared by the researchers based on the outputs of SPSS.V25

It is clear from the results of above table that the value of Guttman Split-Half is good for all questionnaire parts. Also, the value of the Guttman Split-Half coefficient for all survey parts was ,886, which means that the reliability coefficient is high. Thus, the researchers have confirmed the reliability of the questionnaire, which makes them confident of its validity to analyze the results, answer the questions and test its hypotheses.

4.2. Normality distribution

We try to test the distribution of the knowledge management dimensions if it follows the normal distribution by using the One-Sample Kolmogorov-Smirnov test

Table 3: One-Sample Kolmogorov-Smirnov test for knowledge management

| | | Knowledge creation | Knowledge sharing | knowledge utilization | Business intelligence |
|-----------------------------|----------------|--------------------|----------------------|--------------------------|-----------------------|
| N | | 67 | 67 | 67 | 67 |
| Normal | Mean | 4.3112 | 4.2888 | 4.1113 | 4.1037 |
| Parameters ^{a,b} | Std. Deviation | .72177 | .61794 | .61337 | .55542 |
| Most Extreme | Absolute | .172 | .155 | .171 | .179 |
| Most Extreme Differences | Positive | .153 | .119 | .196 | .144 |
| Differences | Negative | 192- | 145- | 169- | 189- |
| Kolmogorov-Smirnov Z | | .891 | .884 | 1.022 | 1.212 |
| Asymp. Sig. (2-tailed) | | .222 | .317 | .209 | .179 |

The table shows the results of the One-Sample Kolmogorov-Smirnov test as the level of significance (Sig) for the dimensions of the knowledge management is greater than α (0.05) for all the dimensions, that meaning the distribution is not significant, this proves the H0, so the knowledge management observations follow the normal distribution.

4.3. Hypothesis testing

After testing the reliability and validity, as well as describing the indicators, in this part we try to test the hypotheses through a set of tests to reach the empirical answer to the problematic as follow:

In this part, we try to diagnose the differences in knowledge management dimensions between the Telecom operators (AT, OTA, WTA) through their dimensions, by displaying and analyzing their indicators.

H: There are differences in knowledge management indicators between telecom operators in Algeria.

This main hypothesis is divided into sub-hypotheses according to the dimensions as follows

H_a: There are differences in Knowledge creation indicators between telecom operators in Algeria.

4.3.1. Knowledge creation: The following is a presentation of the indicators that make up the Knowledge creation and attempt to diagnose differences in their application between the Telecom operators (AT, OTA, WTA) with an estimated confidence level of 95%.

Table 4: One-way ANOVA for the Knowledge creation

Knowledge creation

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 1,349 | 2 | ,674 | 1,369 | ,264 |
| Within Groups | 22,656 | 30 | ,493 | | |
| Total | 24,005 | 32 | | | |

Prepared by the researchers based on the outputs of SPSS.V25

In this table, the result of the one-way ANOVA, as the test value (F=1,369) is not significant (P=,264) at 0.05 error level. This means that the three operators do not differ in their Knowledge creation.

Table 5: Multiple comparisons for the Knowledge creation

Knowledge creation Bonferroni

| | | Mean | | | 95% Confider | nce Interval |
|--------|--------|------------------|------------|-------|----------------|--------------|
| (I) GM | (J) GM | Difference (I-J) | Std. Error | Sig. | Lower Bound | Upper Bound |
| AT | WTA | ,00000 | ,25185 | 1,000 | -,6258 | ,6258 |
| | OTA | ,36000 | ,23499 | ,397 | -,2239 | ,9439 |
| WTA | AT | ,00000 | ,25185 | 1,000 | -,6258 | ,6258 |
| | OTA | ,36000 | ,27181 | ,576 | -,3154 | 1,0354 |
| OTA | AT | -,36000 | ,23499 | ,397 | -,9439 | ,2239 |
| | WTA | -,36000 | ,27181 | ,576 | -1,0354 | ,3154 |

Prepared by the researcher based on the outputs of SPSS.V25

This table shows the binary comparisons between the three operators, as the differences between them statistically are not significant, meaning that the three groups do not differ significantly in their applications for Knowledge creation at the 95% level.

H_b: There are differences in Knowledge sharing indicators between telecom operators in Algeria.

4.3.2. Knowledge sharing:

The following is a presentation of the indicators of the Knowledge sharing and attempt to diagnose differences in their application between the telecom operators (AT, OTA, WTA) with an estimated confidence level of 95%.

Table 6: One-way ANOVA for the Knowledge sharing

Knowledge sharing

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 1,163 | 2 | ,582 | 1,015 | ,370 |
| Within Groups | 26,362 | 30 | ,573 | | |
| Total | 27,525 | 32 | | | |

Prepared by the researcher based on the outputs of SPSS.V25

In this table, the result of the one-way ANOVA test appears, as the test value (F=1,015) is statistically significant (P=,370) at 0.05 error level. This means that the three operators are differ in getting the Knowledge sharing.

Table 7: Multiple comparisons for the Knowledge sharing

Knowledge sharing Bonferroni

| | | Mean Difference (I- | | | 95% Confidence Interval | |
|--------|--------|---------------------|------------|-------|-------------------------|-------------|
| (I) GM | (J) GM | Л | Std. Error | Sig. | Lower Bound | Upper Bound |
| AT | WTA | -,30455 | ,27167 | ,804 | -,9796 | ,3705 |
| | OTA | ,09879 | ,25349 | 1,000 | -,5310 | ,7286 |
| WTA | AT | ,30455 | ,27167 | ,804 | -,3705 | ,9796 |
| | OTA | ,40333 | ,29319 | ,527 | -,3252 | 1,1318 |
| OTA | AT | -,09879 | ,25349 | 1,000 | -,7286 | ,5310 |
| | WTA | -,40333 | ,29319 | ,527 | -1,1318 | ,3252 |

^{*.} The mean difference is significant at the 0.05 level.

Prepared by the researcher based on the outputs of SPSS.V25

This table shows the binary comparisons between the three operators, as the differences between them are not statistically significant, meaning that the three groups do not differ significantly in their applications for Knowledge sharing at the 95% level.

H_c: There are differences in knowledge utilization indicators between telecom operators in Algeria.

4.3.3. Knowledge utilization: The following is a presentation of the indicators of knowledge utilization and attempt to diagnose differences in their application between the telecom operators (AT, OTA, WTA) with an estimated confidence level of 95%.

Table 8: One-way ANOVA of knowledge utilization

knowledge utilization

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 2,817 | 2 | 1,408 | 3,153 | ,052 |
| Within Groups | 20,548 | 30 | ,447 | | |
| Total | 23,365 | 32 | | | |

Prepared by the researcher based on the outputs of SPSS.V25

In this table, the result of the one-way ANOVA test appears, as the test value (F=3,153) is not statistically significant (P=,052) at 0.05 error level. This means that the three operators do not differ in their knowledge utilization.

Table 9: Multiple comparisons for the knowledge utilization

knowledge utilization Bonferroni

| (I) GM | | | | | 95% Confidence Interval | |
|--------|--------|-----------------------|------------|------|-------------------------|-------------|
| | (J) GM | Mean Difference (I-J) | Std. Error | Sig. | Lower Bound | Upper Bound |
| AT | WTA | -,35909 | ,23985 | ,424 | -,9551 | ,2369 |
| | OTA | ,29091 | ,22380 | ,600 | -,2652 | ,8470 |
| WTA | AT | ,35909 | ,23985 | ,424 | -,2369 | ,9551 |
| | OTA | ,65000* | ,25885 | ,047 | ,0068 | 1,2932 |
| OTA | AT | -,29091 | ,22380 | ,600 | -,8470 | ,2652 |
| | WTA | -,65000 [*] | ,25885 | ,047 | -1,2932 | -,0068 |

Prepared by the researcher based on the outputs of SPSS.V25

This table shows the binary comparisons between the three operators, as the differences between them are not statistically significant, meaning that the three groups do not differ significantly in their applications for knowledge utilization at the 95% level.

H_d: There are differences in Business intelligence indicators between telecom operators in Algeria.
 4.3.4. Business intelligence: The following is a presentation of the indicators of Business intelligence and attempt to diagnose differences in their application between the telecom operators (AT, OTA, WTA) with an estimated confidence level of 95%.

Table 10: One-way ANOVA of Business intelligence

Business intelligence

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 1,771 | 2 | ,886 | 1,839 | ,170 |
| Within Groups | 22,149 | 30 | ,481 | | |
| Total | 23,920 | 32 | | | |

Prepared by the researcher based on the outputs of SPSS.V25

In this table, the result of the one-way ANOVA test appears, as the test value (F=1,839) is statistically significant (P=,170) at 0.05 error level. This means that the operators are differ significantly in their achievement of Business intelligence.

Table 11: Multiple comparisons of Business intelligence

Business intelligence Bonferroni

| | | Mean Difference (I- | | | 95% Confidence Interval | |
|--------|--------|---------------------|------------|-------|-------------------------|-------------|
| (I) GM | (J) GM | J) | Std. Error | Sig. | Lower Bound | Upper Bound |
| AT | WTA | -,45152 | ,24902 | ,229 | -1,0703 | ,1672 |
| | OTA | -,02485 | ,23235 | 1,000 | -,6022 | ,5525 |
| WTA | AT | ,45152 | ,24902 | ,229 | -,1672 | 1,0703 |

| | OTA | ,42667 | ,26875 | ,358 | -,2411 | 1,0944 |
|-----|-----|---------|--------|-------|---------|--------|
| OTA | AT | ,02485 | ,23235 | 1,000 | -,5525 | ,6022 |
| | WTA | -,42667 | ,26875 | ,358 | -1,0944 | ,2411 |

^{*.} The mean difference is significant at the 0.05 level.

Prepared by the researcher based on the outputs of SPSS.V25

This table shows the binary comparisons between the three operators, as the differences between them are not statistically significant, meaning that the three groups do not differ significantly in their applications for Business intelligence at the 95% level.

CONCLUSION:

Through this study, we concluded that knowledge management is a modern and important management system and method in the organization to exploit the knowledge that it contains and has a major role in achieving a competitive advantage. Also the process of distributing and sharing knowledge for all workers also increases the confidence of the individual and develops his abilities; the study found that there is great importance for knowledge management in the organization, as it is the basis for its success in the midst of the new digital economy.

Based on the foregoing, it has become necessary for telecom operators to adopt a knowledge-building strategy by defining and accumulating knowledge, i.e. the application of knowledge management according to certain objectives in order to stimulate creativity as this approach is stimulating the context of investment. The organization strategies and activities for achieve the new knowledge, as knowledge management plays a major role in Achieving creativity in telecommunications operators from human resources performance to production processes and then how to invest in knowledge resources. In light of this study, we offer the following suggestions and recommendations:

- necessity of launching and encouraging the creations or business intelligence s of the members of the institution, and encouraging them to adopt them
- Creating and improving the appropriate organizational climate for investing, adopting and developing individuals' ideas.
- Creating opportunities for each framework or individual in the institution to develop and invest their scientific and knowledge capabilities.
- Looking at innovation and business intelligence as an investment and not as a burden on the organization's budget, and working on creating the appropriate means and tools that work on the success of their application.
- Organizations must define their strategies in accordance with the work on developing services, in order to obtain inventions that distinguish them from their competitors, which requires them to intensify the efforts of managers and technical experts in the field of communication services and bring them out to the telecom market;
- Increasing work on training courses, encouraging dialogue and transfer of knowledge between workers themselves on the one hand and between them and clients on the other hand, in order to ensure the acquisition and exchange of more knowledge; Creating the appropriate climate and finding the necessary requirements that help in the application of knowledge management;
- Increasing awareness to localize the culture of knowledge in the organizations under study by holding seminars and conferences that encourage knowledge acquisition, dissemination, storage and application;
- Providing the organizations under study with competencies and qualified cadres that carry innovative ideas that lead to the generation of knowledge and achieve competitive advantages;

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- Orientation towards knowledge management applications in service organizations: From the point of view of telecom operators' managers in Algeria Comparative study

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