Management & Economics Research Journal
ISSN 2710-8856
ISSN 2676-184X
University of Djelfa - Algeria
https://www.asjp.cerist.dz/en/PresentationRevue/615

Vol. 06 No. 02 (2024) P. 547-571

Quality of work life and its impact on the scientific productivity of teaching staff at the Faculty of Economic, Commercial and Management Sciences at the University of Jijel

Boukhedouni Lokman [*] (1)
l.boukhedouni@centre-univ-mila.dz
Université Mohammed Seddik Benyahia - JIJEL, (Algeria)

Received :25/01/2024 *Accepted :07/06/2024*

Abstract

This study aims to determine the impact of quality of work life on the scientific productivity of teaching staff at the Faculty of Economics, Commercial and Management Sciences of the University of jijel. The analytical descriptive approach was used, relying on the survey as a basic tool for collecting data on study variables. It was distributed to a sample of 280 faculty members. The study found a strong impact of quality of work life on scientific productivity in the institution in question. This effect was limited to the dimension of human relations and to opportunities for growth and job security, while there was no strong impact on dimensions (rewards, working conditions, opportunities for human development, career and personal balance, career promotion opportunities, constitutional rights and the syndicate role). Differences at the level of signage are attributed to both the gender variable (male)

[*] *Corresponding author:*

and the social situation variable (a single) and the absence of differences in variables (age group, grade, years of service, monthly income).

Keyword: Quality of Work Life, Scientific Productivity.

1. INTRODUCTION

Various organizations have taken an interest in the internal environment in which the staff member works, and this attention has been heightened by the fact that he has become a form of competition between enterprises, which has given him some quality in the staff working life environment. This is in order to attract and attract staff to work in those institutions. The quality of worklife reflects the quality and availability of an appropriate working environment and material and moral conditions, the existence of good human relations, opportunities for development of human capabilities, the degree to which the institution is concerned with the balance of career and personal life, as well as the extent to which it applies opportunities for career promotion and opportunities for growth and job security. Moreover, the institution has accepted the role of trade union and the application of constitutional rights. All these elements are adopted by the institutions in what are known as quality of work life programmes.

1. 1 The problem of study:

The quality of work life is an important subject for research, especially for researchers and modern institutions, including university institutions, which have also become productive institutions. This production is in the form of scientific and intellectual production of articles and literature published in high-quality world journals, national and international books and interventions. In addition, in order to achieve this intellectual production and ensure the quality of education in university institutions, it is essential to give high priority to the quality of work life of the university professor and faculty. From the above, the problem to be addressed in the study and analysis can be reflected in the following **main question:**

How far does the quality of work life affect the scientific productivity of the teaching staff of the University of jijel?

The following sub-questions include the following:

- How far do rewards dimension affect the scientific productivity of teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel?.
- How far does the working conditions dimension affect the scientific productivity of teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel?.
- How far does the human relations dimension affect the scientific productivity of teaching staff of the Faculty of Economics, Commerce and Management Sciences

of the University of Jijel?.

- How far have the opportunities for developing and developing human capacities dimension affected the scientific productivity of teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel?.
- How far does the career balance and personal life dimension affect the scientific productivity of teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel?.
- How far do career promotion opportunities dimension affect the scientific productivity of teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel?.
- How far after the opportunities for growth and job security dimension have affected the scientific productivity of teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel?.
- How far does the Constitutional rights and the syndicate role dimension affect the scientific productivity of teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel?.
- To what extent are there statistically significant differences in the opinions of the study sample about the quality of work life and scientific productivity due to personal and functional variables (gender, age group, Social situation, rank, years of service, monthly income) ?.

1. 2 Study hypothesis:

In order to answer the problem and sub-questions, the following assumptions must be established or rejected is that:

The main hypothesis:

There is no strong impact of quality of work life on scientific productivity at the significance level 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel

A group of sub-hypotheses emerges from this hypothesis, which are as follows:

Sub-hypotheses:

- There is no strong impact of rewards on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.
- There is no strong impact of working conditions on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.
- There is no strong impact of the human relations on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.
- There is no strong impact of the opportunities for developing and developing human capacities on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences

of the University of Jijel.
- There is no strong impact of the career balance and personal life on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.
- There is no strong impact of the career promotion opportunities on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.
- There is no strong impact of the opportunities for growth and job security on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.
- There is no strong impact of the Constitutional rights and the syndicate role on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.
- There is no statistically significant differences in the study sample at the significance level of 0.05 on quality of work life and scientific productivity due to personal and functional variables (sex, age group, Social situation, rank, years of service, monthly income).

1. 3 Reasons for choosing the subject of the study:

- The desire to know the areas of quality of work life in public institutions, including the university institution.
- The desire to study a university institution, which is because the quality of work life is the quality of the educational process output from scientific productivity, and also a quality assurance course in higher education institutions, including the achievement of an advanced rank in the ranking of Algerian universities at the global level.
- The benefit of the Algerian university institution should receive a realistic study of some of its problems, particularly the levels of scientific productivity;
- To reveal the extent to which the quality of work life of teaching staff in university institutions affects scientific productivity.

1. 4 Objectives of the study:

The main objective of this study is to determine the strength of the effect relationship between the quality of work life on the scientific productivity of teaching staff through practical applied study, highlighting the theoretical aspects quality of work life and its various dimensions as well as scientific productivity.

1. 5 The importance of the study:

This study is particularly important in view of the state's policy of ensuring quality in the higher education sector and the trend towards achieving advanced ranks in the global ranking. and This is done by improving scientific production achieved. It is also important to highlight the need for quality of work life and its relationship with scientific production and to improve it.

1. 6 Study community and sample:

The study community includes permanent professors at the Faculty of Economics, Commerce and Management Sciences of the University Foundation, Mohammed Sadik Ben Yahi Jijel. Data collection was based on the electronic questionnaire method, which was distributed to members of the community through their professional and even personal e-mails in a random sample manner. 208 forms were retrieved for analysis as a result of the responses to all the statements in the questionnaire, and the study sample is therefore 208 professors.

1. 7 Methodology of the study:

The study was limited to discussing the impact of quality of work life through its dimensions, chosen in the light of previous studies in a manner appropriate to the subject matter of the study (rewards, working conditions, human relations, opportunities for human development and development, balance between career and personal life, opportunities for career promotion, opportunities for development and job security, constitutional rights and trade union role) on scientific productivity as a dependent variable, in their view. To address the problem of the study, we will follow the descriptive approach to its relevance to the nature of these studies. The study tool used was the questionnaire, which was divided into three parts:

Part I: Personal and functional variables of the sample members, comprising 07 words.

Part II: The independent variable "quality of work life" has been divided into 8 dimensions with 43 words.

Part III: The variable of "scientific productivity" has a total of 19 words.

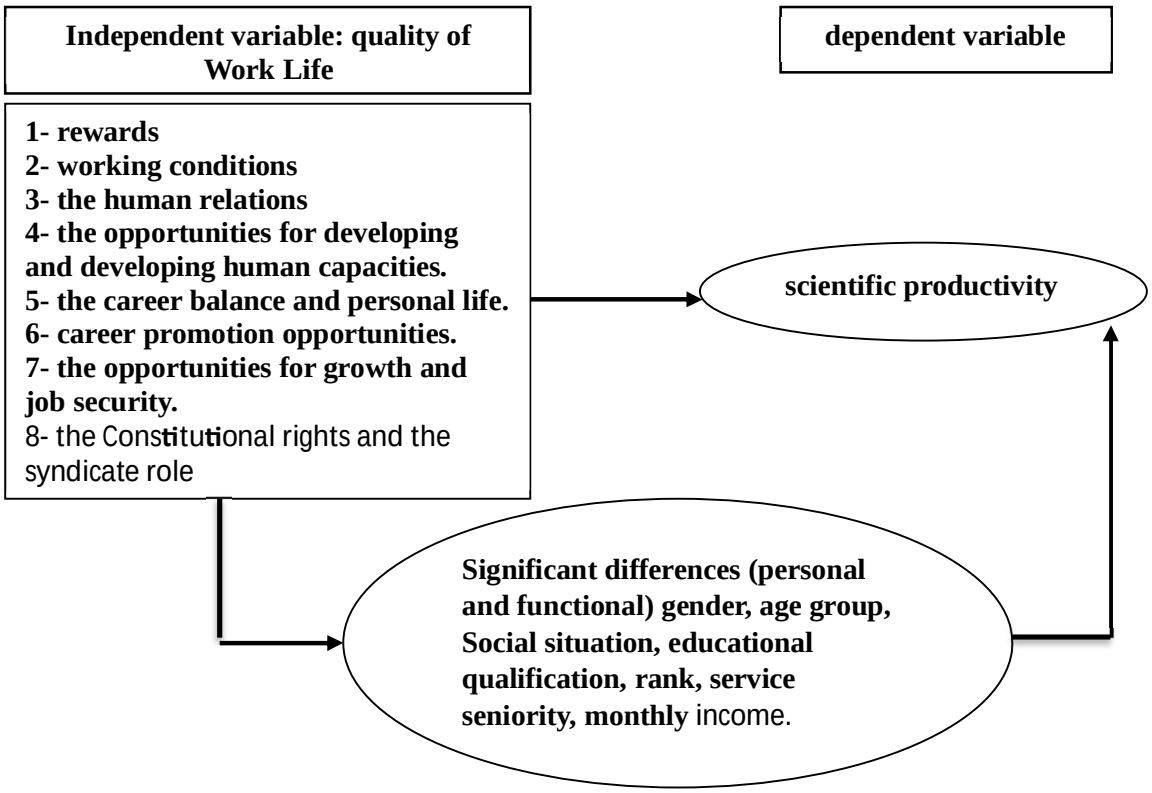
The direction of the teachers' opinions around the axes of the first, second and third questionnaires was measured using the five-point Likerth scale , ranging from a very low degree of agreement to a very high degree of agreement, where the length of the category is equal to 0.8.

1. 8 The validity and reliability of the study tool:

The validity of the study tool indicates that it will measure what it has been prepared to measure, that is, its coverage of all the elements that must be included in the analysis, on the one hand, and the clarity of its paragraphs and individualities, on the other hand, so that it is understood by all those who use it. It has been confirmed that the study tool is true by presenting it to a group of competent university professors and, in the light of their opinions, the study tool has been enriched and built in its final form.

1. 9 Study Model:

Figure. 1. Study Model



Source: prepared by the researcher

2. Theoretical framework for study and previous studies

This part includes the theoretical background related to our current study, for each of the independent variables, the quality of work life, in terms of concept, importance and dimensions, as well as the dependent variable, in terms of concept and importance.

2.1 The Concept of quality of work life.

The concept of quality of work life has evolved as a result of the knowledge accumulation of the of administrative thinking theories. This philosophical concept has been based on two approaches. The first reflects the entry of the Human Resources School, which focuses on the need to satisfy the internal and external needs of the individual and his role in the organization, such as participation in decision-making, independence, etc. This approach has confirmed On the social and psychological side, in order to value the beneficial mental fantasies for the sense of belonging among individuals, (lyne & vaillancourt, 2003, p. 215) Then came the social technical approach, an attempt with it to add a human and technical dimension

to the workplace, The beneficiaries of this trend are of the view that the quality of work life must take into account the broad participation of workers in the professional environment, which allows them great responsibilities with the dynamic learning process to achieve development, and this is consistent with The concept brought by (Srinivas) in the year 1980 about improving work life in the Gestalt way, which takes into account the social and technological factors that can only be achieved by involving the human element in it. (Viateur & Johanne , 1983, p. 571)

Accordingly ,the researcher therefore believes that the effectiveness of performance is achieved by uniting the social aspect of the human factor and the technical aspect of equipment and others, all of which allow organizations, groups and individuals to play important roles within the organization.

The researchers differed and their opinions differed on the concept of quality of work life, and the abbreviation of this concept is (QWL), where we will provide the following some definitions of the quality of work life:

-Swamy & al defines it (2015) as "the extent of employee satisfaction with personal and practical needs through participation in work in order to achieve the goals of the organization." (Swamy, Nanjundeswaraswamy , & Rashmi, 2015, pp. 281- 300)

- “Surya Kumar.Shani” in 2013 defines the quality of working life as: “QWL refers to the relationship between the worker and his environment, adding the human dimension to the technical and economic dimensions in which the work is presented and designed in an unnatural manner. Where QWL focuses on The problem of creating a human work environment where employees work collaboratively and achieve results collectively." (Surya Kumar & Shani, 2013, p. 2)

"C.P.Garg" defines the QWL in 2012 as: "The extent to which the members of the organization are able to satisfy their personal needs through their experience in the institution, and covers a person's feelings about every aspect of the work, including economic rewards, benefits, safety, internal and external justice, working conditions and internal organizational and personal relations, all of which have great meaning in people's lives." (Garg, Munjal, Bansal, & Akshay, 2012, p. 233)

In 2010, Cascio defines the QWL as:"staff perceptions of the working environment are safe, are they worthy of satisfaction, are they balanced between their personal and career lives, and are they given opportunities for learning, growth, development, recognition and self-esteem?" (CASCIO, 2010, p. 24)

Through the previous definitions, we note that each definition has focused on a particular dimension of the QWL, and in light of what has been defined, a researcher can give a definition of QWL as: A continuous and uninterrupted process through

which the organization seeks to satisfy the material and moral needs of employees in the light of achieving a balance between work life and personal life, through which the organization aims to achieve a level of organizational commitment that is reflected in the achievement of the organization's goals.

In summary, changes in QWL's theoretical concept of QWL over almost three decades, and despite all the work, many points are still debatable, including the need for a clear and constructive operational definition, taking into account the progress and consensus achieved so far.

2.2 The importance of quality of work life

Many companies find that attention to staff needs can benefit the organization in terms of productivity and staff loyalty as well as the reputation of the organization, where QWL is important in terms of the following reasons: (Tanuja, 2021)

1- Enhancing relationships with stakeholders and credibility: Organizations that focus on QWL improve their relationships with key stakeholders such as consumers, suppliers, and employees, and develop interest among them.

2-Increased productivity: The recognition and support of the Organization through its stated values and policies for staff obligations can ease external pressure, allow for a focus on staff and reduce absence from work, which improves productivity and enhances staff commitment and loyalty.

3-Attraction and retention: Work and life strategies have become a means of attracting new skilled employees and maintaining the satisfaction of current employees, with many job-seekers favouring flexible working hours as being of benefit to them, where they prefer flexible working hours rather than a further increase in annual wages.

4-Functional Engagement: Organizations with QWL have a high degree of functional engagement because they achieve a sense of competence and match their skills to job requirements.

5- Job satisfaction: job participation is detrimental to job commitment and job satisfaction, as protecting the interests of employers' employees supports job satisfaction and improves work productivity.

6-Reputation of the organization: Many organizations, including governments, NGOs, investors and the media, consider the quality of an employee's workplace experience when evaluating a company, as these responsible investors pay particular attention to QWL when making investment decisions.

2.3 Dimensions of the quality of work life:

The quality of work life includes many dimensions, and this is according to the different opinions of researchers, as we will rely in this study on almost the same dimensions that Walton adopted, and the eight dimensions consist of: (Rostiana, 2017, p. 51)

1. Adequate and fair compensation;
2. Safe and healthy working conditions;
3- Human relations and social integration in the organization of work;
4- Opportunities to develop and develop human capabilities;
5- Balance between career and personal life;
6- Opportunities for promotion and career growth;
7- Opportunities for growth and job security;
8- The Constitutional rights and the syndicate role;

2.4 What is scientific Productivity?

The evaluation and ranking of universities is measured through research outputs, where universities are seen as an engine of entrepreneurship and a generator of knowledge through research production. (Dorgu & Kpolovie, 2019, p. 244)Scientists and researchers differ from each other in their perception of productivity, so the concept of scientific productivity points to the following:

- Scientific productivity refers to the productivity of scientists in their research performance, in other words, , the term relates to the quantity of outputs produced by researchers over a given period of time, or its comparison with the inputs used in the research, The main outputs of research are publications, patents, inventions, and product development. In research institutions, productivity directly refers to publishing productivity, Where most search results are reported as forms of publication, being "more or less productive" simply indicates that the scientist is producing more or less publications than others, Scientific journals, books, conference papers and single graphs are included in the publication numbers, Articles in peer-reviewed journals are also frequently used as a measure of productivity, (sociology-of-science, 2023)The interest in scientific production, knowledge generation and communication and its application to the formation and development of the scientific community has continued. The phenomenon of scientific productivity has therefore been linked to the increase in the number of publications, given that this process can be scientifically described, Productivity indicators are based on the premise that science and technology produce activities that can be measured and

understood in terms of inputs and outputs. (Antônio Mattedi & Rafael Spiess, 2017, p. 04)

-It is also known as scientific productivity by quantifying the cumulative effect, relevance, efficiency and productivity of the scientific work of the researcher correctly and reliably, measured by the h index, It also expresses the quality and quantity of research published internationally, often as books or chapters in books or articles in magazines, conferences or workshops, studies, edited books, abstracts and published catalogues. (James KPOLOVIE & Ewokurai DORGU, 2019, p. 60)

From the previous definitions, it can be said that scientific productivity is the various productions of faculty members of published and unpublished books and literature, as well as scientific papers in conferences, seminars and scientific journals, and the process of supervising and discussing scientific theses for studies and other research activities.

2.5 The importance of scientific productivity for faculty members

The importance of scientific productivity can be known through the services provided by the faculty members, as they provide the following:

1- Teaching: By providing the university student with human and scientific knowledge, developing their scientific thinking, developing positive attitudes, and developing the spirit of citizenship and shouldering responsibility. (Vasileiadoua & Vliegenthartb, Research productivity in the era of the internet revisited, 2009, p. 1261)

2- Scientific research: By doing pedagogical research, basic research or applied research. (Vasileiadoua & Vliegenthartb ibid, 2009, p. 1261)

3- Community Service: This is by proving its existence by employing its scientific production in solving the problems of community institutions with the latter's contribution to financing its research, because it is considered a long-term investment for society. (Ario de Marco, 2019, p. 3)

2.6 Factors affecting the scientific productivity of faculty members

In 2022, the Arab Scientific Community, through a study of researcher Khalil Mohammed Al-Khatib, noted the weakness of scientific research and productivity in the Arab States, This is due to a number of constraints faced by researchers in these countries. (Khalil Muhammad Al-Khatib , 2020, p. 05)Among these constraints that limit the scientific productivity of faculty members are the following: (Mansour Al Zanoun & Muhammad Tafesh, 2019, p. 125)

1- constraints related to the researchers themselves: It is related to the research skills of the faculty member, the academic degree and the number of years of experience, as the abundance of production increases with the chronological age variable, including the large number of teaching and administrative burdens, in addition to the conviction of the futility of research, laziness and weak cooperation between researchers to conduct joint research.

2- Obstacles related to the infrastructure of universities: It is linked to the weak of physical resources, equipment and tools provided by the University, devices and tools provided by the university, in addition to the low percentage of spending on research and development projects, the absence of specialized funds in financing scientific research, the weakness of Internet services, the lack of financial support for conducting research, the lack of specialized centers for scientific research within the university, the lack of availability Technical assistance necessary for scientific research, lack of availability of modern references and sources necessary for scientific research.

3- Obstacles related to regulations, instructions, and the environment of the University: It is linked to the weakness of legislation and laws motivating the conduct of scientific research, as well as the failure to activate the law to protect the rights of the researcher, the lack of a suitable environment for scientific research, the lack of implementation of a central plan for scientific research at the level of universities and colleges, the delay in research arbitration procedures in the scientific fields, and the weakness of legislation establishing cooperation between universities in the field of scientific research.

2.7 Previous studies :

After researching the literature of this study have not found a study that linked the quality of work life and scientific productivity to the knowledge of the researcher, while there are studies on the variable of the quality of work life and scientific productivity variables, including the following:

- A study (Falaq Saliha, Jejeek Zakia, Zarukhi Fayrouz in 2020) entitled: "The impact of quality of work life on the performance of university faculty members on a sample from the Faculty of Humanities and Social Sciences at Chlef University", (Falaq, Jejeek, & Zarukhi, 2020)The objective of this study was to test the impact of the quality of work life (security and career stability, balance between personal and career life, participation in decision-making, wages and rewards) on the performance of university faculty members, with a sample size of 43 professors, Based on the descriptive approach and the identification of data collection, the study

concluded that there is a statistically significant impact relationship between quality of work life practices and teaching performance, while quality of work life practices have no impact on the teaching performance and service of researchers in their community.

-A study (Mohamed Djalele Hocine in 2020) entitled: Factors affecting the scientific productivity of academics: faculty members at Cairo and Alexandria Universities as a model, (Mouhamed Djalele , 2020) This study aims to highlight the most important factors affecting the scientific productivity of faculty members at Cairo and Alexandria Universities. The sample size of the study was 140 members of the faculty. The anthropological method and the electronic questionnaire were relied upon to collect data. The results of the study concluded that there were a number of factors affecting the scientific productivity of teaching staff, including personal, administrative, financial and societal factors. The nature of these factors varied from gender to age and scientific specialization.

- A study (Muhammad Mansour Al Zanoun, Ahmed Muhammad Tafesh in 2019) entitled: "The Reality of Scientific Productivity of Faculty Members in the Faculties of commerce in Gaza Strip Universities During The Years (2014-2018) (Al Zanoun & Muhammad Tafesh, 2019), This study aims to identify the reality of the scientific productivity of faculty members. The size of the study sample was 45 professors. The descriptive approach and the questionnaire were relied upon in data collection. The results of the study concluded that the scientific productivity of refereed research is average, while the unreserved productivity was higher. Annual production averages. The results also showed that there are many obstacles to scientific productivity, the most important of which is the large number of teaching and administrative burdens.

- A study (Avjeet Kaur in 2016) entitled: Quality of Work Life. (Avjeet , 2016)The objective of this study is to understand the quality of work life how and why organizations and staff are working together to improve the quality of work life in order to achieve the effective use of human resources in the Organization. The QWL exercise includes the right balance between work and personal life, nature of job, opportunities, level of stress, career development, rewards, training and motivation. The results of the study concluded that there is an appropriate organizational culture that is detrimental to the staff and job satisfaction of the employee through the policy of compensation, job growth, and career development, which generally guarantees the productivity of the organization.

Commenting on previous studies: The present study meets previous studies in that it addresses one of the two variables, both the independent quality of work life and the dependent variable of scientific productivity. However, as we see it, there is no study that combined both variables with the quality of work life and scientific productivity, as well as their spatial and temporal differences with other studies. This study is characterized by the fact that it examines the impact of quality of work life and its dimensions on scientific productivity.

3. Results of the study

3.1 Testing the stability of the study tool:

Cronbach's alpha index is used to verify the stability of the questionnaires and to verify their quality. The stability is considered acceptable if its value is greater than 0.7. , (Qao & Dowlatshahi, 2005, p. 546)The following table shows the results obtained.

Table 1. Persistence of the study tool

Study variables	number of phrases	Cronbach's alpha coefficient	total Cronbach's alpha coefficient
The first axis: the quality of work life	**43**	**0,966**	**0,967**
The first dimension: rewards	**05**	**0,737**	
The second dimension: working conditions	**05**	**0,921**	
The third dimension: human relations	**05**	**0,841**	
The fourth dimension: Opportunities for developing human capacities	**05**	**0,871**	
The fifth dimension: the balance between career and personal life	**06**	**0,871**	
The Sixth Dimension: Job Promotion Opportunities	**06**	**0,892**	
Seventh Dimension: Opportunities for growth and job security	**05**	**0,815**	
The eighth dimension: Constitutional rights and the syndicate role	**06**	**0,863**	
The second axis: scientific productivity	**19**	**0,908**	

Source: Prepared by the researcher on the basis of the output of the spss programme

The above results show that the value of the overall alpha-kronbach constant value was 0.967 and represents a very strong persistence rate. We also note that the alpha-kronbach constant value for all the study axes exceeded 0.9, of which the study tool is highly stable, the questionnaire is credible and one of which can be relied upon in the field study.

3.2 The validity of the study tool

After verifying the apparent validity of the study tool by presenting it to the arbitrators with experience in human resources management, and after the amendments were made, the questionnaire was distributed and the constructive validity was calculated by calculating the correlation coefficient for the survey terms.

3.2.1 The structural consistency of the dimensions of the first axis: The following table shows the correlation between each of the dimensions of quality of work life and the overall rate of its paragraphs.

Table 2. Ratio of the dimensions of the first axis to the overall rate of its paragraphs.

Study variables	Pearson correlation coefficient	significance level
The first dimension: rewards	**0.807****	**0.000**
The second dimension: working conditions	**0.800****	**0.000**
The third dimension: human relations	**0.764****	**0.000**
The fourth dimension: Opportunities for developing human capacities	**0.835****	**0.000**
The fifth dimension: the balance between career and personal life	**0.831****	**0.000**
The Sixth Dimension: Job Promotion Opportunities	**0.888****	**0.000**
Seventh Dimension: Opportunities for growth and job security	**0.813****	**0.000**
The eighth dimension: Constitutional rights and the syndicate role	**0.810****	**0.000**
The first axis: the quality of work life	**0.620****	**0.000**
The arithmetic mean and the total standard deviation for the first axis	The arithmetic mean	standard deviation
	2,5589	**0,73844**

Source: prepared by the researcher based on the output of the spss program. The correlation is significant at 0.01.

The results showed that the significance level Sig = 0.000 < 0.01, and the correlation rate is confined between ** 0.620 and ** 0.888, which are positive values and greater than 0.5, This indicates a strong correlation between the phrases of each dimension with the sum of the combinations of the first axis, and its calculation average is 2,5589 and falls within the second category of the Lekert scale, which refers to the "unacceptable" option, indicating acceptable consistency, The total standard deviation was *0.*73844 which is less than one, which means there's a homogeneity in the answers of faculty members.

3.2.2 Structural consistency of the second axis (scientific productivity):

The correlation factor between each paragraph of the second axis paragraphs and the total ratio of its paragraphs is limited to between 0.460 and 0.780 at the sign level of sig = 0.0000 < 0.01, We also find that the overall correlation of the second axis (0.818) and the sign level (0.000) indicates a strong correlation between the degree of each paragraph and the total degree of all the second axis paragraphs, As for the total arithmetic mean for this axis, it reached 3.4421, and it falls within the fourth category of the Likert scale, which is the "OK" category, which indicates an acceptable consistency, The total standard deviation is 684200, which is less than one, That means there's a homogeneity in the answers of the teaching staff, from which we say that the study tool is true for the purpose that it was designed to measure.

3.3 Testing of natural distribution of data

The purpose of the data preparation is to test the natural distribution of variables through the Kolmogorov-Smirnov test, where the test hypothesis according to this scale is as follows:

H0: The variables track the natural distribution if the level of significance is completely greater than 0.05.

H1: The variables do not follow the natural distribution if the level of significance is completely less than 0.05.

Table 3. Kolmogorov-Smirnov coefficient for the study axes

Axis	Z value	significance level	Nature of distribution
Axis 1: Quality of work life	**0,950**	**0,327**	normal
Axis 2: Scientific productivity	**0,732**	**0,658**	normal

Source: Prepared by the researcher on the basis of the output of the spss programme

We note from the table that the indicator level for all Z values is greater than 0.05, which means that the study variables are subject to natural distribution, according to the & Dowlatshahi Cao study in 2005 that if the statistical indication of z is greater than 0.05, the study variables are subject to natural distribution. (Muqtadiroh, Astuti, Darmaningrat, & Aprilian, 2017, p. 518)

3.4 Analyze the variance inflation factor and the allowable variance

The indicators of the inflation coefficient of variance and the Tolérance are adopted to ensure that the variables of the independent study are not correlated with each other, so that the multicollinearity problem appears if the (VIF) is greater than

10 and (Tolérance) is less than (0.10). (Douglas, Elizabeth, & Geoffrey, Introduction to Linear Regression Analysis, 2012, p. 296)

Table 4 . Contrast inflation coefficient and Tolérance

variables	(VIF)	Tolérance	D-W
1- rewards	**1,385**	**0,722**	**2.000**
2- working conditions	**1,939**	**0,516**	
3- human relations	**1,801**	**0,555**	
4- Opportunities for developing human capacities	**1,801**	**0,555**	
5- the balance between career and personal life	**1,753**	**0,570**	
6- Job Promotion Opportunities	**2,036**	**0,491**	
7- Opportunities for growth and job security	**1,911**	**0,523**	
8- Constitutional rights and the syndicate role	**1,975**	**0,506**	

Source: Prepared by the researcher on the basis of the output of the spss programme

Note that the differential inflation factor for all independent variables is limited between 1,385 and 2,036 and is less than 10, And the permitted variation is limited between 0.491 and 0.722 and is greater than 0.10, There is no correlation between independent variables, and the D-W statistics are necessarily between 0 and 4, If its value is equal to or close to 2, the non-existent hypothesis is accepted that there is no first-class self-link between statistical errors. (Douglas, Elizabeth, & Geoffrey ibid, 2012, p. 477)From the results of the spss programme, the D-W value is equal to 2, so there is no problem with the self-involvement of errors and from it is possible to continue testing the suitability of the study model by means of regression analysis of variance.

3.5 Examination of the appropriateness of the model and study hypotheses.

The appropriateness of the study model is tested by regression analysis of variance, The following table shows the following results:

Table 5. Results of the Analysis of Variance for Multiple Linear Regression

Model	sum of squares	Degrees of freedom	Mean of squares	The calculated F value	Sig. De F	R	R-two
Regression	**12,243**	**8**	**1,530**	**4,278**	**0,004**	**0,787**	**0,620**
Residue	**7,512**	**21**	**0,358**				
Total	**19,755**	**29**	**-**				

Source: Prepared by the researcher on the basis of the output of the spss programme

Note that that the level of significance F=0.004<0.05, if the model is statistically significant, The value of the correlation coefficient was R = 0.787, and it belongs to the range [0.6-0.8[,So, according to the L.Cohen scale, there's a strong positive correlation (Narehan, Hairunnisa, Norfadzillah, & Freziamella, 2014, p. 29), The value of the R2 = 0.620 is also equal to 62% of the variation in the dependent variable (scientific productivity) explained by the change in the independent variable (quality of work life), and the rest of the effect (38%) due to other factors not included in the study model, This indicates a strong impact of the independent variable on the dependent variable, On the basis of the above, , the main hypothesis is "rejected", which states there is no strong impact of quality of work life on scientific productivity at the significance level 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel?. We accept the alternative hypothesis that there is a strong effect.

3.5.1 Examining the impact of the quality of work life dimensions on academic productivity (testing the sub-hypotheses).

Table 6. The results of the multiple regression analysis, examining the impact of the dimensions of the quality of work life on scientific productivity.

Model	Non-standardized coefficients		Standardized coefficients		t	Sig.
	A	standard error	Beta	Effect Size		
(Constant)	**0,867**	**0,491**	**0,136**	**-**	**1,764**	**0,092**
first dimension	**0,133**	**0,237**	**0,050**	**0,053**	**0,559**	**0,582**
second dimension	**0,039**	**0,164**	**0,458**	**0,085**	**0,239**	**0,813**
third dimension	**0,489**	**0,235**	**-0,314**	**0,154**	**2,078**	**0,050**
fourth dimension	**-0,341**	**0,251**	**0,368**	**0,062**	**-1,358**	**0,189**
fifth dimension	**0,318**	**0,205**	**-0,149**	**0,098**	**1,547**	**0,137**
Sixth dimension	**-0,126**	**0,227**	**0,460**	**0,115**	**-0,556**	**0,584**
Seventh dimension	**0,399**	**0,197**	**-0,203**	**0,141**	**2,023**	**0,050**
eighth dimension	**-0,195**	**0,220**	**0,136**	**0,153**	**-0,889**	**0,384**

Statistically at the level of significant at (α<0.01)

Source: Prepared by the researcher on the basis of the output of the spss programme

The table shows the following:

The first dimension represents rewards and this dimension has reached its impact on scientific productivity (0.053), which is a weak percentage and has no statistical significance, That is, the rewards dimension explains (5.3%) of the variance in the dependent variable, As the level of significance (T = 0.582 > 0.05), Hence, we accept

the first zero hypothesis, which states: There is no strong impact of rewards on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.

The second dimension represents working conditions and this dimension has reached its impact on scientific productivity (0.085), which is a weak percentage and has no statistical significance, That is, the working conditions dimension explains (8.5%) of the variance in the dependent variable, As the level of significance (T = 0.813> 0.05), Hence, we accept the second zero hypothesis, which states: There is no strong impact of working conditions on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.

3. The third dimension represents human relations and this dimension has had an impact on scientific productivity (0.154); And it's a strong percentage and it's statistically significance, that is the dimension of human relationships explains (15.4%) of the variance in the dependent variable, As the level of significance (T = 0.050≤ 0.05), We also find that the degree of influence of the slope of the regression equation A takes the value of 0.489, Which indicates the existence of a strong and direct influence relationship between the dimension of human relations and scientific productivity, Hence, we reject the third zero hypothesis, which states: There is no strong impact of the human relations on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.

4. The fourth dimension represents opportunities for human capacity development, and this dimension has had a significant impact on scientific productivity (0.062) ; which is a weak percentage and has no statistical significance, hat is, the opportunities for human capacity development dimension explains (6.2%) of the variance in the dependent variable, As the level of significance (T = 0.189> 0.05), Hence, we accept the fourth zero hypothesis, which reads as follows: - There is no strong impact of the opportunities for developing and developing human capacities on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.

5. The fifth dimension represents the balance between career and personal life, and this dimension has reached its impact on scientific productivity (0.098) ; which is a weak percentage and has no statistical significance, That is, the dimension of balance between career and personal life explains (9.8%) of the variation in the dependent

variable, As the level of significance (T = 0.137> 0.05), Hence, we accept the fifth zero hypothesis, which reads as follows: There is no strong impact of the career balance and personal life on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.

6. The sixth dimension represents career promotion opportunities, which have had a significant impact on scientific productivity (0.115) ;This is an average ratio and is not statistically significant, That is, the career promotion opportunities dimension, explains (11.5%) of the variation in the dependent variable, As the level of significance (T = 0.584> 0.05), Hence, we accept the sixth zero hypothesis, which reads as follows: There is no strong impact of the career promotion opportunities on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.

7. The seventh dimension represents opportunities for growth and job security. This dimension has had a significant impact on scientific productivity (0.141), And it's a strong percentage and it's statistically significance, That is, the dimension of opportunities for growth and job security explains (14.1%) of the variation in the dependent variable, As the level of significance (T = 0.050≤ 0.05), We also find that the degree of influence of the slope of the regression equation A takes the value of 0.*399*, This indicates a strong and direct influence relationship between the dimensions of growth opportunities, job security and scientific productivity, Hence, we reject the seventh zero hypothesis, which states: There is no strong impact of the opportunities for growth and job security on scientific productivity at the significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.

8. The eighth dimension represents constitutional rights, the syndicate role. This dimension has had an impact on scientific productivity (0.153), This is a high proportion and is not statistically significant, That is, the dimension of constitutional rights and trade union role explains (15.3%) of the variation in the dependent variable, We also find that the degree of influence of the slope of the regression equation A takes a negative value (-0.195) , This indicates that there is an inverse effect relationship between the dimension of constitutional rights, the syndicate role, and scientific productivity, As the level of significance (T = 0.*384*> 0.05), Hence, we accept the eighth zero hypothesis, which reads as follows:There is no strong impact of the Constitutional rights and the syndicate role on scientific productivity at the

significance level of 0.05 among teaching staff of the Faculty of Economics, Commerce and Management Sciences of the University of Jijel.

9- There is no statistically significant differences in the study sample at the significance level of 0.05 on quality of work life and scientific productivity due to personal and functional variables (sex, age group, social status, rank, years of service, monthly income), and for the hypothesis test, the(T) test was used for two independent samples to see if there were any differences, It is a parametric test used to compare the means of two sets of data. The one-way anova test was used, and this test is a parametric test for the comparison of 3 or more averages.

Table 7. Results of the gender variable analysis

Axis of study	gender	Mean	Ecart-type	Test-t for equal variances	Test-t for unequal variances	Sig
Quality of working life	Male	**2.8745**	**0.54932**	**3.614**	**3.593**	**0.000**
	feminine	**2.5910**	**0.56984**			
scientific productivity	Male	**3.5420**	**0.62735**	**3.936**	**3.860**	**0.000**
	feminine	**3.1760**	**0.70626**			
All axes of study	Male	**3.0790**	**0.44270**	**4.755**	**4.680**	**0.000**
	feminine	**2.7703**	**0.48757**			

Source: Prepared by the researcher on the basis of the output of the spss programme

We note that the probability value of sig corresponding to the T test for both the quality of work life and scientific productivity axis and the axes as a whole is equal to 0.000. It is less than the significance level of 0.05, Thus, we conclude that there are statistically significant differences in the opinions of the study sample at the level of significance 0.05 about the quality of work life and scientific productivity due to the gender variable. to reveal the source of the differences according to the gender variable, the arithmetic mean value was used and compared between the two gender, Where we notice that the value of the arithmetic mean for males is greater than the arithmetic mean for feminine, These differences are statistically significant in favor of the male category because it has the largest arithmetic mean.

Table 8. Results of One Way Anova for age group, marital status, rank, years of service and monthly income.

variables	source of contrast	sum of squares	ddl	Mean of squares	F	Sig
Age group	Inter-groups	**0.813**	**3**	**0.271**		
	Intra-groups	**67.390**	**204**	**0.330**	**0.821**	**0.484**
Social situation	Inter-groups	**2.119**	**2**	**1.060**	**3.287**	**0.039**
	Intra-groups	**66.084**	**205**	**0.322**		
rank	Inter-groups	**1.315**	**4**	**0.329**	**0.998**	**0.410**
	Intra-groups	**66.888**	**203**	**0.329**		
years of service	Inter-groups	**1.246**	**3**	**0.415**	**1.265**	**0.287**
	Intra-groups	**66.958**	**204**	**0.328**		

monthly income	Inter-groups	**0.650**	**3**	**0.217**	**0.655**	**0.581**
	Intra-groups	**67.553**	**204**	**0.331**		

Source: Prepared by the researcher on the basis of the output of the spss programme

We note that the Sig level for both age group variables, grade, years of service and monthly income is greater than 0.05. Accordingly, So we accept the hypothesis that there are no differences in the opinions of the study sample at the level of significance 0.05 about the quality of work life and scientific productivity, While we note that the indicator level variable of the Social situation variable is Sig=0.039<0.05 So we reject the null hypothesis and accept the alternative hypothesis that there are differences in the opinions of the study sample due to the variable of Social situation, To find out the source of the trend of the differences, the LSD test was used, as shown in the following table:

Table 9. Results of the LSD test to identify the source of differences for the Social situation variable.

Social status			Difference in means (I-J)	Signification
First medium (I)	Average	Second medium (J)		
Single/single	**2,8164**	(married)	**0,23167***	**0,014**
		other	**0,20398**	**0,389**
(married)	**2,5847**	Single/single	**-0,23167***	**0,014**
		other	**-0,02769**	**0,910**
other	**2,6124**	Single/single	**-0,20398**	**0,389**
		(married)	**0,02769**	**0,910**

* The difference between means is statistically at the level of significance at ($\alpha \leq 0.05$)

Source: Prepared by the researcher on the basis of the output of the spss programme

The table shows that there are statistically significant differences in favor of professors from the teaching staff with a Social situation (single/single) at the expense of professors from the teaching staff with a Social situation (married) and another, While these differences are statistically relevant for professors in social situations (single), Because it has the largest arithmetic mean estimated at (2.8164), and this is confirmed by the significance levels less than 0.05.

4. Interpretation of the results of the study

An explanation of the results obtained can be given as follows:

- There is no strong impact of rewards on scientific productivity, The impact of rewards on scientific productivity has been found to be low, This explains that the scientific productivity of the teaching staff is not related to the condition of improving or increasing rewards, This result differs from the study (Falaq Saliha, Jejeek Zakia, Zarukhi Fayrouz in 2020).

-There is no strong impact of working conditions on productivity ,The impact of working conditions on scientific productivity has been found to be low, This explains why the scientific productivity of teaching staff does not take into account the level of working conditions.

- There is a strong influence of human relations on scientific productivity, It explains that faculty members are paying great attention to human relations and improving them in the workplace, In turn, it develops into building relationships and research work teams whose goal is scientific and research production.

-There is no strong impact of opportunities for human capacity development on scientific productivity ,The impact of human capacity development opportunities on scientific productivity has been found to be low, This explains that the scientific productivity of teaching staff is not related to the requirement to improve and provide opportunities for human development.

- There is no strong impact of the balance between career and personal life on scientific productivity, The impact of the balance between career and personal life on scientific productivity has been found to be low, This explains why there is some balance in the structure of employment and life that does not affect scientific productivity according to the opinion of the teaching staff, This result differs from the study (Falaq Saliha, Jejeek Zakia, Zarukhi Fayrouz in 2020).

- There is no strong impact of career promotion opportunities on scientific productivity, The impact of career promotion opportunities on scientific productivity has been found to be low, This explains that the scientific productivity of the teaching staff is not related to the requirement for career promotion.

-There is a strong impact of growth and job security opportunities on scientific productivity, Explains that faculty members pay great attention to maintaining stability and improving their career relationship with the university institution and their commitment to work for it for as long as possible, While ensuring that the university does not abandon them, including increasing their scientific production, This result is consistent with the study (Falaq Saliha, Jejeek Zakia, Zarukhi Fayrouz in 2020).

- There is no strong influence of the Constitutional rights and the syndicate role on scientific productivity; Where it was found that the impact of post-Constitutional rights and the syndicate role has an adverse effect on scientific productivity, This explains that scientific productivity is adversely affected and does not require post-Constitutional rights and the syndicate role attendance for the scientific production of teaching staff.

- There are statistically significant differences in the opinions of the study sample at the level of significance 0.05 about the quality of work life and scientific productivity due to the gender variable in favor of males at the expense of females, This is explained by the fact that the category of males feels the existence of a level of quality of work life, Their level of scientific productivity is therefore significant because they are easily mobile to attend conferences and others, In addition to the desire of males to achieve a good scientific balance for employment, Unlike the female category who find it difficult to conduct research and navigate, This result is consistent with the study of (Mohamed Djalele Hocine in 2020).
- There are statistically significant differences in the opinions of the study sample at the level of significance 0.05 about the quality of work life and scientific productivity due to the variable of Social situation in favor of the difference of Social situation (single/single), This is explained by the fact that this category feels the existence of a level of quality of work life, and therefore a high level of scientific productivity, Their Social situation makes them more dedicated to scientific research and have no responsibilities, unlike other social situations that are more concerned with their personal lives than scientific production.
- There is no statistically significant differences in the opinions of the study sample at the level of significance 0.05 about the quality of work life and scientific productivity due to each of the variables (age group, rank, years of service and monthly income), This explains that the feeling of quality of work life and the level of scientific productivity is not related to age, rank, years of service and monthly income, Teaching staff are produced regardless of these variables, This result differs from the study (Mohamed Djalele Hocine in 2020).

4. CONCLUSION

The study contributed to shedding light on an important topic linking both the quality of work life and scientific productivity, Based on previous results, a set of recommendations was proposed, summarized in the following points:

- Giving great importance to improving the quality of career in university institutions, on the basis of which the quality of higher education can be ensured by achieving the quality of scientific productivity.
- To support and strengthen research and scientific production teams by focusing on improving the working environment and ensuring the quality of human relations among teaching staff.
- Giving great importance to opportunities for growth and job security in order to maintain stability and improve the functional relations of faculty members in the university institution, And strengthen their commitment to work for it for as long as possible, while ensuring that the university does not abandon them.

5. Bibliography List :

Al Zanoun, M., & Tafesh , Muhammad, A. (2019). " The Reality of Scientific Productivity of Faculty Members in the Faculties of commerce in Gaza Strip Universities During The Years (2014-2018). Journal de l'Université islamique d'études économiques et administratives, Vol 27 (5), pp.121-143.

Antônio Mattedi, M., & Rafael Spiess, M. (2017). "The evaluation of scientific productivity". História, Ciências, Saúde – Manguinhos, Rio de Janeiro, 24(3), pp. (1-17).

Ario de Marco. (2019). "Metrics and evaluation of scientific productivity: would it be useful to normalize the data taking in consideration the investment? microbial cell factories, 18(01), pp 1-3.

Avjeet , K. (2016). " Quality of Work Life". International Journal of Engineering Science and Computing, 6(7), pp. pp. 8305 - 8311.

CASCIO, W.F. (2010). "Managing Human Resources: Productivity, Quality of Work Life, Profits" (8th ed). New York: New York:McGraw-Hill Companies, Inc.

Dorgu, I., & Kpolovie, P. (2019). "Analysis of e-visibility status of faculties in Africa: Google Scholar Citation index as a yardstick". International Journal for Innovation Education and Research, 07(07), pp., 243-266.

Douglas, C. M., Elizabeth, A. P., & Geoffrey, G. V. (2012). Introduction to Linear Regression Analysis (éd. 5). New Jersey, USA: John Wiley & Sons, Inc., Hoboken.

Douglas, C. M., Elizabeth, A. P., & Geoffrey, G. V. (2012).ibid.

Falaq, S., Jejeek, Z., & Zarukhi, F. (2020). " The impact of quality of work life on the performance of university faculty members on a sample from the Faculty of Humanities and Social Sciences at Chlef University". Research and Development Studies Review, 7(1), pp.05-20.

Garg, C.P, Munjal, N., Bansal, P., & Akshay, K.S. (2012). "Quality of Working Life: an Overview". International Journal of Physical and Social Sciences, 2(3).pp.231-242.

James KPOLOVIE, P., & Ewokurai .D, I. (2019). "COMPARISON OF FACULTY'S RESEARCH PRODUCTIVITY (H-INDEX AND CITATION INDEX) IN AFRICA". European Journal of Computer Science and Information Technology", 07(06) ,pp.57-100.

Khalil Muhammad .Al.K . (2020, 06 28). "The reality of scientific research in the Arab world (2008-2018) Analytical descriptive study. Arab Scientific Society Organization" Consulted in 03 24, 2023, https://arsco-org.translate.goog/article-detail-1656-8-0?_x_tr_sl=ar&_x_tr_tl=fr&_x_tr_hl=fr&_x_tr_pto=sc,.

lyne , j., & vaillancourt, l. (2003, septembre). "satisfaction et motivation au travail". pharmactuel, 36(4).

Mansour Al Zanoun, M., & Muhammad Tafesh, A. (2019). " The Reality of Scientific Productivity of Faculty Members in the Faculties of commerce in Gaza Strip Universities During The Years (2014-2018) ". Journal de l'Université islamique d'études économiques et administratives, 127(5),pp.121-143.

Mouhamed Djalele , H. (2020). " Factors affecting the scientific productivity of academics: faculty members at Cairo and Alexandria Universities as a model". Journal of Faculty of Letters Human and Social Sciences, 13(2),pp.133-171.

Muqtadiroh, F., Astuti, H., Darmaningrat, E., & Aprilian, F. (2017). "Usability Evaluation to Enhance Software Quality of Cultural Conservation System Based on Nielsen Model (WikiBudaya) ". Procedia Computer Science, 124, pp. 513–521.

Narehan, H., Hairunnisa, A., Norfadzillah, R., & Freziamella, L. (2014). "The Effect of Quality of Work Life (QWL) Programs on Quality of Life (QOL) Among Employees at Multinational companies in Malaysia". Procedia - Social and Behavioral Sciences, 112 , pp. 24-34.

Qao, Q.,& Dowlatshahi, S. (2005)."The impact of alignment between virtual and information technology on business performance in a agile manufacturing environment". Journal of operation management (23).

Rostiana, R. (2017). "The Quality of Work Life Influence to Turnover Intention With Person-Organization Fit and Organizational Commitment as Mediators". International Journal of Economics and Management, 11(1), pp.(45,57).

sociology-of-science. (2023). http://sociology.iresearchnet.com/sociology-of-science/scientific-productivity/,. Consulted in 03 24, 2023, sur http://sociology.iresearchnet.com/sociology-of-science/scientific-productivity/.

Surya Kumar, M., & Shani, N. (2013). "A Study on Quality of Work Life Among the Employees at Metro Engineering Private Limited". International Journal of Management, 4(1),pp. 01-05.

Swamy, D., & Nanjundeswaraswamy , & Rashmi.S. (2015). "Quality of Work Life: Scale Development and Validation". International Journal of Caring Sciences, 8(2), pp. 281- 300.

Tanuja, A. (2021). "Quality Of Work Life(QWL) ",Nature, Scope and Importance. Consulted in 01 05, 2023, on https://www.businessmanagementideas.com/notes/management-notes/employee-motivation/quality-of-work-life-qwl-nature-scope-and-importance/5077.

Vasileiadoua, E., & Vliegenthartb ibid, R. (2009).

Vasileiadoua, E., & Vliegenthartb, R. (2009). "Research productivity in the era of the internet revisited". Research Policy, 38, pp 1260–1268.

Viateur, L., & Johanne , T. (1983). "La Qualité De Vie Au Travail Et Horaire Variable, Relation Industriel". (D. d. Laval, Éd.) Relation Industrie, 38(03), , DOI : https://doi.org/10.7202/029379ar, URI : https://id.erudit.org/iderudit/029379ar.