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Competency development and realizing creativity: A field study conducted on sample of Saida university teachers

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Praise be to God who has made me reach this position and gained this level of education and extended my knowledge.

I sincerely and humbly, thanks my family especially my mother for always believing in me and a certain someone and all those who provided support in the realization of this thesis.

My utmost respect and appreciation to all professors who instructed us with high standards.

Dedication

In memory of our beloved cousin Djebbar yamina manel who was a leading model for all the grandsons, she lives forever in our hearts.

I dedicate this thesis to all those who look around for the information and spend days and nights collecting it.

I dedicate this thesis for those who offered us knowledge, guidance and support.

For my mother and grandmother whom their hearts and prayers were always with me.

For my father who taught me how to be a man.

For my two little sisters,

And my dear friends Abdelkarim et youcef.

Abstract:

This study aims to identify competency and creativity development and implementation in professor at the university of Saida Dr Moulay Tahar, in various departments. In order to get to the desired results of this study a questionnaire was built and distributed to a sample of 70 teacher chosen randomly from various departments of the Saida university by analyzing the questionnaire answers using the SPSS program version 23. The results showed that there is a gap between study results and reality facts

Key words: Competency development, Creativity realization, university professor, Saida university

خلاصة

تهدف هذه الدراسة إلى التعرف على العلاقة بين تنمية الكفاءات وتحقيق الإبداع لدى الأستاذ الجامعي بجامعة سعيدة، من أجل تحقيق هذا الهدف قمنا بدراسة استقصائية على عينة مكونة من 70 أستاذ بجامعة سعيدة في مختلف التخصصات بعد تحليل إجابات العينة المبحوثة باستخدام برنامج spss23، خلصت هذه الدراسة إلى نتائج عديدة أهمها وجود أثر دال احصائيا لتنمية الكفاءات على تحقيق الابداع عند الاستاذ الجامعي بجامعة سعيدة
الكلمات المفتاحية: تطوير الكفاءات. تحقيق الإبداع، الأستاذ الجامعي، جامعة سعيدة

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Introduction

Introduction:

In the 21st century, all the world's leading organizations in different fields understood that change is necessary for growth and development of the organization.

The 21st century is where world leading companies such as Tesla the electric car company number 1 worldwide led by its founder Elon musk who's actually highly innovative and demonstrates competency in many products, is recruiting employees with competency regardless if they have a diploma or not. Founded on 1st of July 2003 was worth 31.54 billion $ in late Decembre of 2020. A fortune of 31 billion dollars made in 17 years was surely made by the good implementation and use of resources and competencies and making space for creative activities and innovation.

Human resource management is one of the most important functions in various economic organizations, as it guarantees providing the organization or the firm with the necessary and most suitable HR for its activity, which in turn are considered the most important factors of production, success and consistency of the organization's performance. In order to achieve excellent results and not fall behind the rapid changing and development of world organizations, it is the responsibility of those in charge of HR management and development to look for and select the best competent employees to achieve high class results and the most creative employees in order to find success in failure, Creativity and competency are indeed a discovering process of solutions to solve problems in an effective and superior performance.

Creativity ranked at the top of most 21st century lists of skills followed by innovation, critical thinking, problem solving, leadership and other sets of skills. These skills are summed up in one word, which is competency. It is what make an employee qualified to be integrated into an organization or not, Nowadays, organizations look for employees with the desired skills and competencies that serve their long and short-term goals. These competencies, if acquired by an individual or organization, create a gap in performance between he who is competent and he who isn't, which is why all organizations are in constant need for the development of their employee's competency and to foster their creativity within the organization .

Introduction

Problematic: is there a relation between competency development and creativity realization?

Study hypotheses:

The first main hypothesis: Statistically there is a significant relation between competency and creativity.

The second main hypothesis: Statistically there is a significant effect that Saida university teachers are constantly developing their competency

The third main hypothesis: Statistically there is a significant effect that Saida university teachers have creative characteristics and work creatively.

Study importance: The study's importance reflects the fact that it is one of very few studies that discusses both competency and creativity at once, not to mention the scarcity of creativity research. The importance of this study emerges in theory in an attempt to clarify the concepts and definitions of both competence and creativity and how to develop it and enhance it, as a complementary study to the proposed recent studies in the field of competency and creativity. This study has more depth, in analysis and clarifying terms and processes, which will benefit researchers who shall conduct new research of both fields by reviewing the component, results and findings. As for the practical aspect, the importance of the study demonstrates in being one of the rare studies that dealt with the issue of Developing competency and realizing creativity at university teachers.

Reasons for choosing the topic:

- The lack of studies that dealt with such topics, especially those related to implement creativity.

- Novelty of the topics.

Study objectives: this research was conducted to see if there is an existing relation between Saida university professor's creativity and competency.

if the professor has the competency needed to teach and transfer knowledge

if Saida university professor are creative or not, and do they teach in a creative way.

Introduction

Methodology of the study: This study is conducted at the University Dr Moulay Tahar Saida, Algeria. University teachers has been chosen as the sample of this study. In term of data collection, a descriptive method and an applied research is used in this study. the instrument of this study is a questionnaire treated by SPSS software.

Research difficulties:

- Huge lack of references and resources of previous studies.

-Difficulty in reaching university teachers due to the Covid-19 planning.

-The refusal and procrastination of some teachers to respond to this research

The limits of the study: this study was conducted at the year 2020/2021

Objective boundaries: The study aims mainly at defining and clarifying concepts and definition and demonstrates process and theories and any existing relation between creativity and competency.

Spatial boundaries: The questionnaire was distributed within the university that were studied and located in the state of Saida in Algeria

Time limits: The current study was implemented during the 2020/2021 academic year.

Research framework: The study was divided according to the IMRAD methodology to address the research problem and test the validity of the proposed hypotheses. This is one of the most popular methods for researchers to review and browse the various sections of the study**.** This method is based on:

- Introduction (I)

- Method (M)

- Result and Discussion (RAD).

The research is broken down into 2 chapters:

First chapter is for theoretical aspects contain 3 topics. 1st Topic related to competency starting by the discussing origins of competency, clarifying the misconception about the term competency, present scholars Definitions, process, characteristics and a competency model moving on to how competency can be preserved

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Concerning the 2nd topic, starting by demonstrating creativity meaning definitions, concept, definitions, characteristics, creative process, methods of creativity enhancement and theory of creativity.

3rd Topic is about the prior studies of both competency and creativity and the relation between this study and previous studies.

second chapter contain the practical field study which was conducted at the university of Saida, starting by introducing the higher system of education, and Saida university. We explain how the sample of the study was selected and its size, plus the questionnaire design how it was formulated, designed and collection of data and analysis, not to mention the results of the study to test the hypotheses.

Chapter 1

The theoretical framework of the study

I. Competency Development.

Topic introduction: This chapter contain a brief look at the history of competency, its origins and it also aims to clear the misconceptions of competence and competency. Definitions, classifications components of competency are also presented in this chapter, an approach to competency, process of making a competency model and competency mapping.

1. Understanding competency.

A Quick Glance at the History of Competency:

In the last century business has come in its attitude towards workplace competencies. In the beginning of the 20th century, jobs started to demand complex skills. Typical business processes required specific and selected competencies for the task given.
These competencies could be acquired only through years of on-the-job learning and practice. Then came the era of scientific management where the use of assembly line shifted competencies from workers to time-and-motion study.
The competency movement has been in use in business through the groundbreaking work of the well-known David McClelland (1973), Richard Boyatzis (1982), Spencer and Spencer (1993), and many others in the field for more than three decades.
The term competency has been defined in the literature from several and many different points of view. but, one factor that united the literature was that the purpose of defining competent performance or competencies was to improve and rise the human performance at work. (Hoffman.T, 1999)

1.1 Origins of competency

Competency has its origins in the Latin word “Competentia” it means “is authorized to judge” as well as “has the right to speak” (Association, 2006)

The English dictionary defines the word **competence** as the state of being suitably sufficient or fit.

This term drew a lot of attention and interest from psychologists in the first half of the twentieth century, as evidenced by the abundance of empirical studies in the field of psychology at the time.

However, it wasn't until the 1970s, when (McClelland, 1973), a Harvard University psychology professor and founder of McBear and Company, later known as the Hay Group, published a study titled "Testing for Competence Rather Than Intelligence," that the term was widely used and investigated in various human resource management (HRM) practices and studies. In the study (McClelland, 1973) found that students who performed poorly in universities may have done well in their lives and careers, just like top students. He went on to say that traditional intelligence or aptitude tests, as well as school grades, are less accurate predictors of job performance or other important life outcomes. Instead, underlying personal traits and long-term qualitative behaviors, which he referred to as "competencies," could be more effectively measured and validated for individual job performance and life success. In specific he proposed that not only traditional cognitive skills and knowledge (e.g., reading, writing, and calculating skills) should be measured, but also personality variables “that are more generally useful in clusters of life outcomes” (p.9).

when it comes to determining individual levels at the workplace performance, some of the variables to consider are: Leadership, ego development, interpersonal skills, communication skills, patience, goal-setting ability, Decision making ability and so forth.

MacClelland's idea of competencies made a significant impact on HRM practices because it introduced a new perspective and sparked a movement to investigate more valid and reliable tools for predicting job performance of individuals in the workplace. Leading business foundations started using competencies for recruiting, selecting, managing the superior performers and developing. Later in 1982 MacClelland’s idea was extended by (Boyatiz, 1982) who developed ‘Job competence assessment’ technique to identify the attributes

that distinguish and separates top performers from average performers from bad performers in managerial context in the United States. Since then, the concept of competency has spread throughout the world.

However, the important roles of competency have yet to be fully integrated into the business world, resulting in a gap between theory and practice. also a number of misconceptions appeared in literature about the use of the term ‘competency

1.2 meaning of term “Competency”:

The term competency has been defined in the literature from many different points of view. It was originally used in the field of education to describe trainee teacher behaviors (Bowden, 1993)

It became widely known in the management field through the work of (Boyatiz, 1982)

the term competency was not ``owned" by any particular group. In fact a variety of stakeholders were involved in using the term, each with their own agendas (Burgoyne, 1993)

Trying to draw a fine line between the words such as proficiency/ capability/capacity/ competence/ competency & competencies is even more difficult and creates confusion.

Those who spend time evaluating competency have dealt with a lack of uniform definitions, compositions, and methodologies, which leads to misunderstanding and wandering, in which we see extremely important to clarify the misunderstanding in this study.

1.3 What is competency?

The term "competence" first appeared in an article authored by R,WHITE in 1959 as a concept for performance motivation

competencies are the characteristics of a manager, leader or a teacher that leads to a demonstration of skills and abilities, which result in effective performance within an occupational area. Competency also incarnate the capacity to transfer skills and abilities from one area to another.

Competence is the combination of demonstrable characteristics and skills that improve the efficiency & performance of a job

Competence is the ability to do a job properly. A competency is a set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of the behaviors in individual employees.

A competency is a measurable human capability that is required for effective performance. A competency may be comprised of knowledge, a single skill or ability, a personal characteristic, or a cluster of two or more of these attributes. Competencies are the building blocks of work performance. The performance of most tasks requires the simultaneous or sequenced demonstration of multiple competencies.

1.4 The misperceptions: Competency and Competence?

Many studies on competency development and assessment have been conducted in various countries, focusing on various fields and professions. However, the term "competency" is a "fuzzy" concept that can lead to a lot of misunderstandings. This is especially the case when the term "competence" (instead of "competency") was used in some studies, but there was no clear explanation or elaboration as to why. As a result, it gives the impression that these two terms are substitutable and that there is no difference between them.

According to a review of the literature, "competency" and "competence" are two distinct "approaches" to HRM research. It says that “competency” is a behavioral approach that is focused on the individual. The term ‘competencies' is commonly used in this approach to refer to the behaviors or personal qualities. It has characteristics that support a field of work and is especially influential in the United States. The second approach is task-oriented functional approach. It is prevalent in the United Kingdom and uses the term "competence" more frequently to describe a set of work tasks or job outputs. Boak 1991 argued that both terms complement each other.

Table 1 The comparison between the term ‘competency’ and ‘competence’

Competence	Competency
-Focus on the results - Describe the features of the area of work tasks or job outputs - Constitute of the various skills and knowledge needed for performing the job - Not transferable as each skill and knowledge is more specific to perform the job - Assessed by performance on the job -People oriented	-Focus on person behavior - Describe the attributes of the person - Constitute of the underlying attributes of a person for superior work performance - Transferable from one person to another - Assessed in terms of behaviors and attitude - People oriented

Source: (YUVARAJ, 2011)

As shown in table 1, There are a few distinctions between "competency" and "competence." People, on the other hand, frequently interchange these terms to suit their own research context and convenience. There was no clear agreement on what constitutes a competency and what does not, and the terms "competency," "competence," and other related terms were used interchangeably. The terms are only what the definer wants them to mean.

1.5 several definitions of competency:

The definition of competency is one of the hardest tasks in research, with little agreement among researchers. the difficulty was found in selecting the one that fits all.

“a personal trait or set of habits that leads to more effective or superior job performance, in other words, an ability that adds clear economic value to the efforts of a person on the job”. (McClelland, 1973)

“Competencies are underlying characteristics that are causally related with the job performance of individuals. They can be trained during adulthood”. (Boyatiz, 1982)

“Competence lies in the individual's capacity which superposes the person's behavior with needed parameters as the results of this adaptation make the organization to hire him”. (Boyatiz, 1982)

The personal specifications which effect on a better performance are called competence. (Mansfield, 1997),

“Competencies include the collection of success factors necessary for achieving important results in a specific job or work role in a particular organization” (Robert, 2012)

“Competencies are those characteristics- knowledge, skills, mindsets, thought patterns, and the like-that, when used either singularly or in various combinations, result in successful performance” (Duboi, 1998)

“Motives, traits, self-concepts, attitudes or values, content knowledge, or cognitive or behavioral skills – any individual characteristic that can be measured or counted reliably and that can be shown to differentiate significantly between superior and average performers, or between effective and ineffective performers” (Spencer, 1993) according to spender a competency is an individual characteristic that exists on three levels:

1. Knowledge and skill are observable and measurable because they are on the surface.

2. Characteristics, traits and motives are embedded deeply within an individual and tend to relate to more enduring characteristics like personality.

3. Self-concept is found in between and includes an individual’s attitudes, values, and self-image.

These three levels are linked to individual performance through an Intent-Action–Outcome.

However, since early pioneering investigations, it is generally agreed that competency can be clinically defined as " a person's underlying characteristics that are related to effective or superior performance in a job or situation" ((Boyatzis, 1996, Klemp, & Spencer & Spencer)

Competencies refer to "…a set of observable performance dimensions, including individual knowledge, skills, attitudes, and behaviors, as well as collective team, process, and organizational capabilities, that are linked to high performance, and provide the organization with sustainable competitive advantage"

1.6 components of Competency:

There are five major components of competency by (Tucker, 1994)

1. **Knowledge:** This refers to information and learning within a person, such as surgeon's knowledge of Human Anatomy.
2. **Skill:** This refers to a person's ability to perform a certain job, such as surgeon's skill to perform a surgery
3. **Self-Concepts and Values**: This refers to a person's attitudes, values and self-image. An example is self-confidence, a person's belief that he or she can be successful in a given situation, such as a surgeon's self confidence in carrying out a complex surgery.
4. **Traits:** refer to physical characteristics and consistent responses to situations or information. Good eyesight is a necessary trait for surgeons, as is self-control is an ability to remain calm under stress.
5. **Motives:** are emotions, desires, physiological needs or similar impulses that prompt action. For example, surgeons with high interpersonal orientation take personal responsibility for working well with other members of the operating team.

2 Classification of Competency :

In order to set the context of theoretically derived competence classes, a short review is given regarding some of the classification patterns.

In literature different patterns for classification of competencies are given. Most often, researchers define categorization according to their own theory and purpose of the study.

Katz and Kahn (1986) grouped competency into three areas which later expanded into the following four:

1. ***Technical or Functional*** (knowledge, attitudes, skills, etc. associated with the technology or functional expertise required to perform the role);
2. **Managerial** (knowledge, attitudes, skills, etc. required to plan, organize, mobilize and utilize various resources);

3. **Individual** (knowledge, attitudes and skills required to motivate, utilize and develop human resources)
4. **Conceptual** (abilities to visualize the invisible, think at abstract levels and use the thinking to plan future business).

Carrol and McCrackin (1988) organized competencies into three main categories.

1. **Core competencies** (Hamel and Prahalad, 1994): A core competency forms the basis for strategic direction; it is something a company does well relative to other competitors.
   Core competencies refer to the elements of behavior that are important for all employees to possess as, for example, a core competency in "result/ quality orientation".
2. **Leadership / managerial competencies**: This category involves competencies that are related to leading an organization and people. Some examples include "visionary leadership", "strategic thinking", and "developing people".
3. **Functional competencies:** These are job-specific skills required to perform a particular job role or profession.
   Under the Functional and Job Specific Competencies, it is important to categorize two types of skills:
   • **Hard Skills**- reflect on the Technical Requirements of the job. Example, Employee Relations Executive needs to have a good understanding of the Employment Laws especially when handling Union Negotiation or Termination.
   • **Soft Skills**- Skills that complement in performing the hard skills effectively. Example, in the process of negotiating a Collective Agreement, an Employee Relations Executive needs to be fluent in Communication Skills and Negotiation Skills in order to ensure the negotiation ends well with a win-win situation.

3. developing competency:

scholars describe competency development as an important feature of the wider defined concept of competency management.

‘Development’ refers to:

- Improving existing competencies. methods of accomplishing this include specific exercises, gaining more knowledge and changing attitude and behavior.
- Adding new competencies to your professional arsenal. This involves continuous learning process and openness to new challenges.

The majority of definitions of competency development center on improving or enhancing human performance. A competency, according to Richey fields it is the state of being well qualified and describes the critical ways in which competence is demonstrated.

Competence is defined by the ibstpi (International Board of Standards for Training, Performance, and Instruction) as a set of related knowledge, skills, and attitudes that enable an individual to effectively perform the activities of a given occupation or job function to the standards expected in the workplace. As a result, competency is linked to job performance and can be measured against commonly accepted standards.

The term "development" is a generic term that covers both informal and formal intentions of educational, training and development activity. The starting point for any development work is to identify the need. According to Martin there are three kinds of development needs:

1 **A gap**, which is a deficiency between what can be done and what is required.
2 **A problem**, which means that a problem has arisen and that a possible training intervention could resolve it.
3 **A need**, which is more aligned with longer-term direction of the company and aims to create a synergy where the human capability meets with the needs of the business.

Competency development collect its strength from many different learning activities specifically, training, on the job learning and career management are directed at the development of different types of competencies. The development of functional competencies is mainly achieved through training and job learning. Although learning competencies and career competencies can also be incorporated in formal training sessions, these competencies are mainly established through career management practices and on-the-job learning activities, which put a stronger emphasis on the employee's responsibility for

and active involvement in competency development. This emphasis on self-reflection and self-management leads to an increase in learning and career competencies.

The process of competency development leads to a new set of functional, learning and career competencies assessed within the performance management cycle. This new set of competencies will lead to a new personal development plan and to a new need for competency development.

the conceptual model of competency development can be an important steppingstone for scholars investigating the concept of competency development as well as for practitioners constructing or reviewing competency development within their organization.

3.1 Issues in the development phase: Key-stakeholders:

The lack of senior management "buy-in" is one of the most significant roadblocks to competency development achievement. Gaining the support of key stakeholders, especially top management, is critical and necessary. Their commitment will help to ensure that all employees, managers, and other professionals involved in the project cooperate and participate fully in the project's learning. Mentioning the benefits to the key-stakeholders is an important consideration in promoting "buy-in" and gaining their support. Showing them, for example, how this project will empower employees at all levels to take control of their own learning and develop and sharpen their skills at work which results in a better performance and high quality outputs of the organization.

1. **Resistance during the development phase:**

Of course, as with any change management project, some resistance is to be expected. Development involves change, and change is faced with acceptance or refusal. there are two types of resisters:

active resisters: may express strong opposition to the project by refusing to cooperate with requests for information or people, as well as delaying actions. They can be harsh, accusatory, fault-finding, manipulative, start rumors, argue, distort facts, and intimidate others.

passive resisters: they appear to comply with project requirements, but in reality they attempt to undermine the project by verbally agreeing but not

carrying out the agreement. Failing to put change into action intentionally. They allow the change to fail without assistance or support. More than 35% of competency development projects attempted to fail due to passive resisters. It is very important to gain both sides of resisters and convince them to accept the change for a better future.

2. Competencies number per job profile:

What is the ideal number of competencies per job profile? This is a question that many organizations frequently ask. The number of competencies in a single competency profile should not exceed 12 competencies, according to various authors and practitioners (Boyatiz, 1982). any more complicates the framework's use and management assessment. A group of 7 to 9 total competencies are usually required of a particular job, according to (schippmann, 2000), depending on the work and organizational environment. Due to the large number of competencies, evaluating them can be difficult. The more detailed the model, the better it is. The problem here is not only determining the appropriate number of competencies, but also determining the appropriate number of behavior indicators to describe each proficiency level.

Some profiles had as many as twenty-five competencies, each with four or five behavioral indicators per proficiency level, which was a common mistake. For a single role, this resulted in a total of over a hundred criteria to rate.

4 competency mapping:

The process that identifies key competencies for a company or firm and the jobs, demands or functions within it is competency mapping. It is used to identify key attributes (knowledge, skills, and behavior) that are required to effectively do task classification or any identified processes. Competency mapping analyzes individuals SWOT (Strengths, Weaknesses, Opportunities & Threats) for better understanding and this helps to improve his career growth.

Competency mapping determine the gaps between the actual and the desired levels of performance of an employee and is highly beneficial in assisting individuals to contribute significantly to their jobs by presenting a clear picture of the existing gaps between the required and actual competencies

It consists of breaking a given role or job into its constituent tasks or activities and identifying the competencies (technical, managerial, behavioral, conceptual knowledge, attitudes, skills, etc..) needed to perform the same successfully.

Competency mapping determines the extent to which the various competencies related to a job are possessed by an employee. Competency mapping envisages development and sustainability of competency, based on the changing organizational requirements. Therefore, competency mapping is a process a HR expert uses to identify and describe competencies that are most crucial to success in a work situation.

Competency mapping is one of the most accurate ways to identify the work and behavioral capabilities of individuals in an organization. Companies are dramatically changing their strategy to have multi-skilled employees with only one skill. The competency approach focuses on linking business strategy to individual performance efforts. The focus of employee development is to improve their abilities, not to prepare them for a job change. In this way, they can develop useful capabilities in the change and development of the entire organization.

5 competency model:

what is competency model?

A competency model (or competency framework) is a collection of competencies & a blueprints for success. It may apply to: all staff in the organization / a level of leadership / a job role / a business function/ a professional discipline / a particular job task

Why have a competency model?

The purpose of a competency model is three-fold.

- It communicates what is expected of staff, how they should do their job.
- It is used as a benchmark to ensure people have the skills they need for success.
- It is used to organize and provide access to individual development resources

A Competency model is a valid, observable, and measurable list of the knowledge, skills, and attributes demonstrated through behavior that results in outstanding performance in a particular work context.

Competency model is a set of competencies that include the key behaviors required for excellent performance in a particular role.

Competency models are often highly tailored to the organization. As such, the elements of a competency model communicate, in clear terms, the circumstances and conditions of performance. Individual competencies are organized into competency models to enable people in an organization or profession to understand, discuss, and apply the competencies to workforce performance.

Approaches for building competency model:

There are three approaches for building competency models

The single-job approach: The first competency models and the most common approach to competency modeling were developed for the single jobs.

Developing a single-job competency model begins with identifying the critical position that HR professionals believe it needs improved selection or development of incumbents. In most cases, data is collected through a resource panel or focus group of job holders and/or their managers, as well as interviews with jobholders. Interviews with customers and direct reports, surveys of additional job holders, and direct observation of job holders at work may all be part of the data collection phase. After that, the data is analyzed to create a competence model, which typically contains 10-20 qualities, traits or talents, each with a definition and a list of particular actions that indicate what effective performance looks like and how to achieve effective results.

The "one-size-fits-all" approach: HR professionals who want competency technology to have a broad, quick, and consistent impact often use a "one-size-fits-all" competency model, which defines one set of competencies for a variety of jobs (e.g., all managerial jobs).

The first step is to determine for whom the model will apply to, such as all managers or new employees. Instead of gathering data, a team tasked with developing the competency model usually selects concepts from available individual job competency models and from books and articles on leadership, business, organizational development, and human resource development.

A multiple-job approach: This method generates a variety of models based on the jobs and levels. When none of the jobs have anything in common, this method is used. To move forward with developing useful models, the organization must be more specific about the model's potential applications.

Such an approach is required, and assumes, for example, that an organization requires competency models for 25 managerial and professional jobs, as well as consistent programs and tools for performance management, professional development, and job selection based on the competency models. The Advantage of having a Competency Model is that it assists in all HR functions in the organization:

Recruitment & Selection ensure that the selected candidates are aligned to the Core Competencies of the organization Performance in order to ensures that all employees are measured objectively.

5.1 The process of developing competency models:

There are some steps to a comprehensive and detailed competency modeling process. Each is described in more detail below. While the steps are presented in a logical order, the process can be a little less orderly in practice due to the interrelationships between them.

Step 1: Defining the Objectives

The first and most important step in a competency modeling project is to define the objectives clearly and precisely. In this process, you must answer 4 critical questions. The first and most important step in a competency modeling project is to define the objectives clearly and precisely. In this process, four critical and essential questions need to be answered.

1-Why is there a need to develop a competency model? Because competency modeling necessitates a significant time and financial investment, it should be driven by a strong need. it is a must to consider the issues to be addressed, the benefits to be gained, and the opportunities to be pursued by developing and implementing a competency model.

2-What is the unit of analysis? Will the findings be applicable to a single work group, a department, one employee, or the entire company? Will they be applied to a group of organizations or to all members of a profession? As a result, the goal is to identify the skills required for effective performance in a specific job or more narrow function.

3-What is the relevant timeframe? Is it necessary to address the competency problem now, or will it be necessary to identify these competencies later? Many organizations choose to identify both the competencies that are currently required and those that will be required in the near future. The ability to forecast

future needs will vary greatly depending on the rate of change and the types of factors that influence the field under consideration.

4-How will the competency model be applied? Will it be used for employee selection, promotion, performance management, training and development, certification, succession planning, compensation, rewards and recognition, or career planning? Many of the methodology and competency model decisions will depend on the intended applications and be influenced by it.

Step 2: Obtain the Support of a Sponsor.

A sponsor is necessary for each competency modeling project to provide the information, resources, support, and authorization required to ensure its success. gaining the commitment and participation of the employees, managers, professionals, or others from whom data will be collected is an important part of the sponsor's support.

Sponsors, who could be a chief executive, department head, program manager, or the board or management of a professional association, must have influence and jurisdiction over the relevant units of analysis. Preparing answers to the following questions will help you persuade your sponsor that the competency modeling project is a worthwhile investment of organizational resources:

- What specific organizational requirements will be addressed by the competency model?
- How will the model meet these requirements?
- What other possible applications does the model have?
- What method will be used to develop the model? What is the rationale behind this strategy?
- Who will be involved, including employees, managers, professionals, and other stakeholders?
- How long will the model take to develop and implement?
- What steps will be taken to ensure the model's development and application are successful?
- What are some of the potential roadblocks, and how do you plan to overcome them? What are the costs of developing the model, both tangible and intangible?

It's critical to be clear about what's needed, including staff time, project authorization, equipment and supplies facilities and other resources, most importantly, the sponsor's commitment to ensuring full cooperation and

participation from employees, managers, and other stakeholders involved in or affected by the project. It is preferable if this information is provided on both sides.

Step 3: Develop and Implement a Communication and Education Plan

One of the most important aspects of any competency project's success is persuading those who will participate or be affected of its importance. These stockholders' buy-in, commitment, and cooperation are critical. work with people who are familiar with the organization to identify all of the project's stakeholders. Individuals and groups who will benefit, be negatively impacted, be inconvenienced, or be affected in any way as a result of the competency study are included in this category.

classify each individual or stakeholder group into one of three categories to determine the probable level of support they will provide:

Committed: These individuals will willingly participate in data collection or pilot testing, provide funding or other resources, and persuade others to support the research.

Compliant: These stakeholders will do what is asked of them, but will not go above and beyond.

Resistant: Active resisters may express their opposition to the study by refusing to cooperate with requests for information or people, delaying requested actions, or even attempting to stop it. Passive resisters may appear to comply with project requirements on the surface, but their true intentions are to undermine the research.

Prepare a communication strategy to address any concerns that may arise. Organizational leaders, for example, may be concerned that a competency model that dictates criteria for making these decisions will supplant their autonomy in selecting and evaluating their employees. To calm them down, emphasize in your communications that the completed competency model will provide them with tools and guidelines for making decisions.

Step 4: Identify the Competencies and Create the Competency Model.

Identification of Competences: the identification process would start with the first task in the first duty and end with the last task in the last duty. A content analysis of the data collected is used to create the initial list of competencies required for effective job performance.

Based on the content of each individual expression, the set of coded expressions that results from the coding process can be divided into three subgroups. Expressions depicting personal characteristics (attitudes, characteristics, and values), as well as knowledge (declaratory and procedural) of skills, fall into this category (the ability to apply knowledge for practical purposes).

The first draft results of the analysis were subjected to expert review using Mintzberg's model of managerial roles. Individual managerial role definitions can be used to identify critical skills required of managers in order to perform well. Furthermore, Mintzberg's definition of managerial roles is broad enough to allow for the identification of generic skills and abilities that could be applied to a variety of managerial positions. The behavioral descriptions of the final set of identified skills were also developed using Mintzberg's definitions.

Communication skill - ability of an individual (manager) to communicate consciously and harmonically, that is, to speak as clearly and comprehensibly as possible, to listen attentively to others, to distinguish the substantial from the marginal, to be open to others' needs, and to be aware of nonverbal signals.

Cooperability - ability of an individual (manager) to participate actively and responsibly in group work processes, such as sharing their knowledge, being open to others and respecting their ideas and opinions, adhering to the "game's" agreed-upon rules, and always keeping the common goal in mind.

Motivational skill - ability of an individual (manager) to energise and bring colleagues and subordinates into line in a desired manner, i.e. to exert influence over an individual's activity by appealing to their hierarchy of values, attitudes, abilities, knowledge, and skills.

Evaluation and supervisory skill - ability of an individual (manager) to objectively and systematically justify and evaluate their own and others' work results using appropriate criteria and standards of values, assess their significance, and systematically conclude the results.

Cognitive skills - Individual's (manager's) ability to use knowledge and information to understand their relationships and solve problems. The ability to recognize problems, deconstruct them into smaller units, seek and find alternative solutions, integrate them, and make global decisions.

Organizational skill - ability of an individual (manager) to schedule results, organize one's own work and the work of others in order to ensure that the work process runs smoothly and that an appropriate share of responsibility is assumed.

Flexibility/Adaptability - ability of a person (manager) to react to changing circumstances. It is the art of adapting one's way of thinking, behavior, or problem-solving solutions to a new situation.

Creativity - Individual's (manager's) ability to be open to unusual and rarely used arrangements.

Finally, the competency model's three levels (skills, knowledge, and personal attributes) were combined and the competency model was completed.

Table 2: Managerial competency model

Competency	Skills / Knowledge		Personal attributes
	managerial	vocational / other	
LEADERSHIP COMPETENCY	Communication skill Cooperability Motivational skill Evaluation and supervisory skill	University education in technical or economic field Other vocational knowledge Orientation in the given branch Computer literacy Driving license (ability) English and German Language	Self-reliance Responsibility / Accountability Diligence Activity / initiative Self-development orientation Stress resistance
COMMUNICATION COMPETENCY	Communication skill		
MANAGERIAL COMPETENCY	Cognitive skills Organizational skill Creativity Flexibility/Adaptability Communication skill		

Source: (Jakub Procházka, Petr Smutnýa, Martin Vaculík, 2014)

6 **Transfer competence:** The term "transfer" refers to an employee's altered work behavior in situations in the workplace that are either marked by modified or entirely new work tasks, or in which routine tasks predominate that one could not handle previously but is now capable of handling more efficiently through the use of transfer.

All transferred competencies are transferred by using a competency model or the training on the job learning in order to acquire the required competencies for the job or task demands.

Employees can also learn certain transferable skills based on observation only such as communication, leadership, decision making, problem solving, teamwork, collaboration. this is very important to nurture the organization culture in the new employee’s minds.

Topic Conclusion: nowadays developing competences has become very important buildup stone in order to not fall behind the rapid change in the environment of the world leading organizations. we defined competencies as a measurable human capability that is required for effective performance. they are observable and measurable, transferable, able to develop using competency development model, based on performance and goals of the organization. in order to not fall behind, a high performance is required.

II. Realizing Creativity

introduction:

This topic presents creativity meaning and definitions, clarifying and demonstrating the relation between creativity and innovation, creativity and intelligence. According to this study it is very important to demonstrate this relation due to the huge misunderstanding between the three concepts and how they are connected. moving on to the characteristics of the creative personality, creativity theory, process and techniques to assess and implement creativity.

1. Meaning of creativity:

Creativity is characterized by the ability to perceive the world in new ways, to find hidden patterns, to make connections between seemingly unrelated phenomena, and to generate solutions. Creativity involves two processes: thinking then producing.

Creativity means bringing three different new and unique elements into the world. It means materializing new and novel objects. It means initializing new and novel actions. It means assembling new and novel knowledge.

Creativity is a special kind of learning that takes place as new and novel actions or knowledge are assembled by its creator.

Creativity is the act of turning new and imaginative ideas into reality.

1.1 CREATIVITY DEFINITION:

Creativity is a complex and mysterious concept, and therefore it is difficult to define creativity because of the ambiguity about the concept and no accepted a definition for it in general. Creativity has been defined in various ways and perceived in different ways as a mental ability, a process and a human behavior

The earliest definitions of creativity were based on the concept of creative individual, (Guilford, 1950) defined creativity as “In its narrow sense, creativity refers to the abilities that are most characteristic of creative people. Creative abilities determine whether the individual has the power to exhibit creative behavior to a noteworthy degree. Whether or not the individual who has the requisite abilities will actually produce results of a creative nature will depend upon his motivational and temperamental traits”, That definition became dominant during the 1950s and it is popular among creativity researchers.

Morris Stein's definition. “That process which results in a novel work that is accepted as tenable or useful or satisfying by a group at some point in time." (stein, 1953)

Creativity is defined in as: “the production of novel, appropriate and useful ideas in any realm of human activity, from science, to the arts, to education, to business, to everyday life” (Amabile T. , 1997). Novelty refers to originality, that is, the production of something new, and usefulness refers to the appropriateness of an idea in solving the considered problem. the ideas have to be new and appropriate to the opportunity or problem presented

(Drazin, 1999) defined creativity as “an engagement process in creative acts regardless of whether the outcomes are creative, novel and useful or not”.

Creativity involves openness and the self-confidence, courage to pursue ideas despite external discouragements, courage to make error and standing out of your comfort zone

When acting creatively, rather than being influenced by contrary views, individuals attend to their inner voices, and personal beliefs about what is right or worthwhile.

2. Creativity and innovation:

Creativity is the seed of all innovations, Strong relation exist between creativity and innovation, it is believed that creativity boosts and enhance innovation.

After the defining creativity we will demonstrate the distinguishing relation between it and innovation starting with innovation definitions.

Innovation definition:

We collected various definitions of innovation and noticed remarkably an overlap between the definitions, the overall number and diversity in defining innovation resulted in different definitions, one of the biggest challenges facing innovation researchers today is a lack of common definition. Here I collected some definitions characterized by an adaptability to different fields and covers many aspects.

‘Innovation is defined as the adoption of an idea or behavior whether a system, policy, program, device, process, product or service that is new to the adopting organization.’ (Damanpour, 1992)

"An idea, practice, or object that is perceived as new by an individual or other unit of adoption" (Rogers, 2003)

‘Innovation is defined as “a technologically new or significantly enhanced product compared to the firm’s previous product” which has been commercialized on the market.’ (Palmberg.C, 2004)

‘Innovation is an idea, practice or object that is perceived as new to an individual or another unit of adoption.’ (Fruhling, 2007)

“Innovation is the successful exploitation of new ideas.” (the national archives, 2007)

"Innovation is the multi-stage process whereby organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace" (Baregheh, 2009)

From creativity to innovation:

creativity concerns the cognitive/behavioral processes applied when attempting to create or generate novel ideas. innovation concerns the processes of realizing or implementing the novel ideas.

The introduction, adoption or modification of new ideas to a company needs and the promotion of these ideas is considered as a creative process, meanwhile the practical implementation of these ideas is indeed innovation, hence creative ideas will remain creative unless they transform to novel products, services or even processes.

There is this explanation which I found very interesting presented by amabile explains: all innovation begins with creative ideas. she defined innovation as the successful implementation of creative ideas within an organization. In this view, creativity by individuals or teams is a starting point for all innovation.

Creativity can indeed exist without innovation, for example you can ask art students to paint creatively or cinema students to produce a short movie in a creative way, the engagement of painting and shooting in a creative way is consider as creative act regardless of the results.

The students did not come with new method or process of painting and shooting hence no innovation.

Innovation cannot exist with the absence of creativity and it comes with invention for example electric car and plane was once just an idea in a person’s head. the efforts to realize these ideas is both innovative and creative engagement. Transforming the electric car from an idea to an object is innovation hence: innovation comes with invention.

3. **Creativity and intelligence:**

Intelligence definition:

The term Intelligence has crossed our minds in uncountable times to the point where it seems unnecessary to define it, but it is more than that.

It is the complex cognitive ability to learn from experience, grasp knowledge, analyses facts, and adapt to the environment. Here I present a selected definition of intelligence.

“The ability to learn, understand and make judgments or have opinions that are based on reason” (” Cambridge Advance Learner’s Dictionary, 2006)

“Intelligence is not a single, unitary ability, but rather a composite of several functions. The term denotes that combination of abilities required for survival and advancement within a particular culture.” (Anastasi.A, 1992)

“An intelligence is the ability to solve problems, or to create products, that are valued within one or more cultural settings.” (H.Gardner, 1993)

“Intelligence is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience.” (Gottdfredson, 1997)

Creativity vs intelligence:

intelligence and creativity are both functions of the mind that process information to figure out a solution or determine an answer to a problem. Intelligence and creativity are different abilities that contribute to each other.

Intelligence is measured by the intelligence quotient (IQ). Creativity, on the other hand, isn’t so easy to measure. It is generally believed that people with high IQ are more creative, and people who are highly creative naturally have high IQ. This isn't necessarily true.

Researchers have found a correlation between individuals with an IQ of 120 or more having a higher level of creativity, of course there is a strong correlation between intelligence and creativity, from this view individuals with the capacity to carry out abstract reasoning also have the skills to bring creative ideas.

creativity and intelligence are different concepts, which means a person do not need to have high cognitive abilities in order to reveal his creativity, this suggests that there are factors other than IQ that can determine creative potential in individuals such as flexibility and sensitivity, openness to the environment, meanwhile intelligent people can be non-creative if they lack the characteristics of a creative personality, as opposed to the notion that creativity does not refer to a different concepts of intelligence, it is an integral part of it.

4. Creative personality characteristics:

Characteristics suggested by Barron: self-assertion, preference for complexity, less use of suppression as a defense mechanism, greater tendency to express impulses, independence in judgment.

listed a high level of broadly defined intelligence, openness to experience and emotion, freedom from inhibitions and stereotyped thinking, aesthetic sensitivity, flexibility, independence in thought and action, love of creation for creation's sake, and endlessly questing new challenges and solutions.

(stein, 1953) described the creative person as a curious, self-assertive, aggressive achiever, motivated by a need for order, who while being self-critical, conventional, self-sufficient, intuitive, and empathic, is also less inhibited. His creative person, while emotionally unstable, is capable of using instability effectively

(amabile, 1989)added self-discipline about work, perseverance even when frustrated, the ability to wait for rewards, self-motivation, and willingness to take risks

Table 3 : Personality Characteristics Associated with Two Patterns of Creative Individuals

Characteristics Associated with Openness and Courage to Explore Ideas	*Characteristics Associated with Listening to One's Inner Voice*
• Sensitivity to problems • Aesthetic sensibilities • Curiosity • Sense of humor • Playfulness • Fantasy thinking • Risk-taking • Tolerance for ambiguity • Tenacity • Openness to experience • Adaptability • Intuition • Willingness to grow • Openness to feelings • Unwillingness to accept authoritarian assertions without critical examination • Integration of dichotomies	• Self-awareness of creativeness • Persistence • Independence of thought • Self-disciplined • Self-directed • Autonomous • Self-confident • Reflective • Introspective • Internal locus of control • Rejecting of stereotypes • Energetic • Hard-working • Absorption in work • Unsociable

(Edwin C. Selby, Emily J. Shaw, and John C. Houtz)

Creative people are humble and proud of their achievements, and are thought to be rebellious and independent, yet cannot create in the absence of the knowledge, rules, or conventions of their cultures. They have internalized the values of their domains while maintaining their instinct for questioning the "givens" and assumptions of those domains. Creative individuals are simultaneously passionate and objective about their work. Finally, their openness and sensitivity expose them to a great deal of suffering, as well as enjoyment.

5. **Factors affecting creativity:**

Creativity is found within individuals and individuals do indeed effect and get effected by their surroundings and environment in which creativity occurs. there is various number of factors that effects the creative operations, a successful implementation of creative idea depends on these factors:

- Organizational environment
- Problems
- Experiences
- time
- Desire

6. **Techniques of creativity:**

There are many techniques used to implement and motivates the creative thinking process here I listed some of the widely used and well-known effective techniques:

Brainstorming: a technique developed by Alex F. Ozborn in 1957.

The main purpose of brainstorming is to gather a team in order regenerates large number of alternative fruitful ideas on a certain specific problem without any criticism to the ideas or the team members then evaluate each and every idea in terms of its pros and cons, ideas that are unworkable or unable to apply will be eliminated leaving only those who are worth a further consideration.

The main purpose of this is gathering as much information and data as input from large various number of people for a further stimulation.

Six Thinking Hats: the credit of this technique goes to EDWARD DE BONO, he created 6 hats each with different color, each color refers to a thinking style and a specific perspective, it was found that this technique also helps avoiding

disagreements amongst people from different culture. The colorful hats and their meaning represent the following:

- -**White hat:** refers to the neutrality of a person who focuses on collecting data and available information, facts and logic.
- **-Red hat:** refers to intuitive person that thinks based on emotion and instincts to address a problem
- **-Black hat**: refers to the cautious person who predict the negative outcomes and all the bad points in the plan, this makes the plan more secure and resilient.
- -**Green hat:** refers to creative thinking approach to problems
- -**Blue hat:** refers to control hat, this hat is usually used by the chairperson of the meeting or the man in charge of the operation, the one who directs people to act accordingly
- **Yellow hat**: refers to optimistic positive thinking that gives a sense of encouragement, focuses on identifying all benefits and strong points

Lateral thinking: in 1967 DE BONO pointed out that solution to problems can be found by using unorthodox methods, lateral thinking means leaving your preconceptions and traditional methods of thinking, it aims to solve problems through indirect and creative approach.

7. Creativity theory:

(Amabile T. , 1997) suggested that the componential theory of creativity indicates every individual has the capacity to engender at least slight creative work and some factors such as working environment and time may impact creative behavior level and its frequency. Based on this theory, individual creativity consists of three major components, each being necessary for creativity in any situation. They are: expertise or domain skills, creativity thinking skills and intrinsic task motivation. Amabile theory shows that creativity occurs when individual skills coincide with strong intrinsic motivation and this will lead to higher creativity (Amabile, 1996) surely do personality plays a very important role in intrinsic motivation, plus the social environment also impact the level of intrinsic motivation of individuals at any time (Amabile T. , 1997). creative individuals are those who generate new methods to carry out their work by coming up with novel procedures, and by reconfiguring existing ways into new alternative ways

Individuals may have high creativity if they have the personality traits of creative people. For example, intrinsic motivation of individuals includes satisfaction of curiosity, pleasure, personal challenges, self-expression and interest Intrinsic motivation refers to the main trait of creative people, and therefore creative people tend to follow intrinsic motivation, while extrinsic motivation tends to hinder creativity (Runco, 2004). Expertise is knowledge: intellectual, procedural, and technical. In addition, expertise is considered as the basis of creative work, and therefore creative people do not create novel ideas from nothingness, but those new ideas start from domain-relevant knowledge and a set of developed skills (simonton, 2000)). Expertise in any activity is an essential element for producing new ideas, opposed to existing ideas and that requires preceding knowledge of that activity. Cognitive style means how individuals determine problems and provide the solutions for those problems and their ability to merge existing ideas to produce novel amalgamations. Thus, cognitive style indicates the level of individuals imagination and their flexibility in facing problems.

8. Creativity process:

Rhodes (1961) 4 P's is one of the most widely used models and one of the first to state that creativity is a confluence of four aspects: **person**, **process**, **press**, **products**.

PERSON refers to diverse attributes of those who create, their personality, intellectual, or biographical characteristics. The term person, covers information about intellect, personality temperament, traits, behavior, attitudes, self-concept, value systems, defense mechanisms, and habits.

The studies presented by Guilford shows that people who out stand their fellows as creative thinkers, are characterized by, mental flexibility, fluency of ideas, divergent thinking, sensitivity to problems and ability to redefine concepts or familiar objects.

In another study by Frank Barron found that people of complex temperament are more creative simple temperament people. Mary Jones submits the guess that late mature people are more flexible thinkers than early mature people.

Eric Fromm observes that a creative person has the capacity to be puzzled, the ability to concentrate, a genuine sense of self and confidence in self, the ability to accept conflict and tension.

PROCESS: refers to the chain of actions and events involved in doing creative work, the term process applies to motivation, perception, learning, thinking, and communicating.

Wallas formulated Helmholtz's ideas in his book “The Art of Thought”, into four stages: preparation, incubation, inspiration, and verification.

The **preparation** step consists of observing, listening, reading, asking, collecting, comparing, analyzing, contrasting, and relating all kinds of objects and information. Is the mode of thought in Preparation is conscious, ‘‘voluntary’’ and ‘‘regulated’’ rather than a ‘‘wild ranging of the mind’’ (Wallas, 1926, p. 85)

The **incubation** process is both conscious and unconscious. This step involves thinking about parts and relationships, reasoning, and often a fallow period. this means that the person takes time away from the task and allows the subconscious to operate.

For (Wallas, 1926, p. 86), Incubation had two attributes. Its first attribute was that, during Incubation, ‘‘we do not voluntarily or consciously think on a particular problem’’ the second attribute was that ‘‘a series of unconscious and involuntary mental events may take place’’

inspirations frequently appear During this dark phase. This is probably why so many people stress the importance of releasing tensions in order to be creative. It's the Eureka moment! Or a "Aha" that occurs while you're showering, walking, or doing something completely unrelated. The solution appears, seemingly out of nowhere.

verification is a period of hard work. This is the process of converting an idea into an object or into an articulated form.
the creative process can be taught. It is being taught in hundreds of classes across the nation colleges, universities, business organizations, military schools, and industries. in 1954 the Creative Education Foundation was formed solely for the purpose of encouraging a more creative trend in American education.

Press: refers to pressure from the external environment, be it physical or social that impacts creativity. The term press refers to the interaction between human beings and their environment. Creative production is the result of certain kinds of forces playing upon certain kinds of individuals as they grow up and function. A person’s ideas are formed in response to sensations, perceptions, issue needs and imagination from both internal and external sources a person receives

sensations and perceptions. the possession of multi-factorial intellect, including ability to store and recall memories and to combine ideas and concepts. Each idea that arises reflects uniquely on the originator's self, his sensory mechanism, mentality, value systems, and conditioning to the everyday experiences of life. Each person has a distinct perspective on his environment.

Product: refers to the output of creative work, the productions which take many diverse forms depending on the field. The word idea refers to a thought which has been communicated to other people in the form of words, paint, clay, metal, stone, fabric, or other material. When we speak of an original idea, we imply a degree of newness in the concept.
When an idea transforms into tangible form it is called a product. Each product of a person mind or hands presents a record of his thinking at some point. a new machine concept reflects the inventor's specific thoughts at the time the concept was created, it may also be possible to trace the thoughts and events that led up to the idea by probing backward from the moment of inspiration. Products are indeed artifacts of thoughts. investigating the nature of the creative process can proceed in only one direction, from product.

The second model of creativity is the 7 **"Cs"** presented by (lubart, 2017):

Creators refers to those who engage in the production of original, meaningful content. The cognitive, personality-motivational, emotional characteristics of these actors are central topics, which have received historically much attention. The actors or agents who create may be children, adolescents or adults. However, they may also be collective entities, groups, or even non-human agents such as animals or computers.

Creating focuses on the creative process, the sequence of steps, actions, and events that trace the path that creators take. Studies of creating may focus on the creative act as a kind of process that generates new productions. However, there may be an additional interest in comparing the paths that lead to variations in the degree of creative work, its quantity or quality. It is also important to note that some analyses of creating focus on macro-process steps, such as "incubation", whereas other work focuses on micro-processes, such as the detailed movement from one idea or association to the next within a divergent thinking sequence.
Collaborations is the term used to signify the involvement of significant others in the creative process. This may be an individual creator, such as a writer, who interacts with another person, such as his or her literary agent or critic, it may be a dyad of creators who work together, or a team of people who work on a

project, which is often the case in industrial settings. The collaboration, in terms of interaction patterns, the nature and complementarity of the collaborators (team diversity) are some specific examples of topics that concern this "C". Finally, it is worth noting that collaborations may occur between different kinds of agents, notably humans and computers.

Contexts refers to the physical and social world in which creators engage in the creative process. It includes the home environment, school and organizational contexts, local, national, and international environments. The environment provides resources and constraints, it orients behavior. It affords certain actions more than others, facilitating or hindering creative behavior but also providing the field within which new productions will be situated and evaluated. Creators experience the influence of multiple layers of the environment.

Creations, the production resulting from the creative process, may be a tangible or intangible output. It may be a relatively unformed idea, or a full-fledged "product". The characteristics of the production, such as its' originality compared to previous works, its' "usefulness" may be some criteria that the creator and external judges take into account. Work on the definition of creativity and assessment procedures including judge's behavior relate to this "C".

Consumption refers to the adoption of creative ideas and productions. Those who encounter a creative product may adopt it more or less quickly, with more or less enthusiasm. Creations are situated within a context of the marketplace of existing ideas, products, or previously known solutions. In this sense, consumption of creative ideas or "goods" includes topics such as marketing, championing behavior, and the diffusion of creative products.

Curricula concerns the education and development of creativity. The impact of educational programs and the stimulation of creativity through techniques that can be learned are key topics in this "C". In addition, educational course programs and materials about creativity itself, as a scientific topic, or programs to raise awareness in society, such as museum shows and displays are part of this C

Implementing creativity Two essential principles of the creative personality are Field Theory and the importance of the affective domain. Field Theory suggests that human behavior is a function of the interaction of personality and the environment. Any study of the person must consider the environment in which the person functions. Secondly, we consider that the affective domain is as important to creativity as is the cognitive domain.

Because problems are often complex, creativity is not easy work. We must not assume that to be creative one need only to "think," or use certain "tools" or cognitive skills, to generate creative solutions. Logic, as well as neuroscience and brain research, offers strong evidence that emotional processes and cognition must interact if creativity is to occur. Consideration must be given to the motivation and needs, interests, and attitudes that help the individuals to be productive creatively.

Obstacles of creativity:

Obstacles to creativity must be identified because they may obstruct a major contribution or idea that an individual can make or have. Sometimes the impediments to creativity are overt, in the sense that they are visible. The obstacles, on the other hand, are frequently psychological, operating subliminally and unconsciously-since there can be no universal pattern in the nature of obstacles.

- Habit and routines Certainty
- Boredom Self-doubt
- Stress and Rational thought
- Politeness Fear of appearing childish
- Specialization Unwillingness to play games
- Age
- Refusing change and adaptation

Enhancing creativity:

Here are some strategies and tips o foster and enhance creativity

- By providing resources and space, you can encourage people to use different methods to complete tasks.
- Value the individual differences, styles, and points of view by engaging in a variety of activities or other ways to be unique.
- Reinforce unusual responses and ideas.
- Encourage individuals to make decisions and participate in goal-setting to foster a sense of belonging and have control over oneself.
- Encourage individuals to learn and use specific creative problem-solving tools and skills in the workplace.
- Provide a work schedule that is realistic.

- By framing mistakes as positives, you can instill confidence in the individuals and reduce their fear of failure.
- Respecting an individual's need to work alone or in groups, encourage self-initiated projects.
- Tolerate chaos and complexity.
- Individuals should be treated with mutual respect and acceptance.
- Encourage a spirit of collaboration, open confrontation and conflict resolution, and the free exchange of ideas.
- Open communication that allows information to flow freely throughout the organization.
- Individuals who are highly creative are given special attention. (A person who has shown creative behavior may be assigned work that allows them to take a break from their daily homework.)
- Time to think - a period of time is set aside for individuals to think and engage in creative activities.

Topic Conclusion:

Creativity can be defined as a thinking process that enables a person to produce something novel and useful, either for the individual or for the organization, as a result of proper stimulation from the environment. It is the most advanced mental process that includes reasoning. It is the first step to innovate.

Creativity involves openness and the self-confidence, courage to pursue ideas despite external discouragements, courage to make error and standing out of your comfort zone.

III. Prior studies.

Competency prior studies.

Competency Based Approach between Theory and Practice. a practical study conducted at Constantine university by Faiza Bader and Hacene Hamada.

Sample: 42 middle school teachers at their final year of studies**.**

The purpose of this study is to see how well pre-service middle school English teachers at the Teachers Training School of Constantine (ENSC) can put the Competency Based Approach (CBA) principles into practice. A survey of 42 pre-service middle school teachers revealed that there is a gap between what they know and what they do. there is a gap between the CBA's theoretical framework and the practical experience gained in the field. the classroom, as well as the practical application of that knowledge as a result, more efforts should be made to ensure that a better teacher is available. At the school level, there is a focus on quality and training.

Results:

The results of this study revealed that a significant number of pre-service middle school teachers at Constantine's Teachers Training School are theoretically aware of the CBA but are unable to apply this knowledge in a practical setting.

Studies in Arabic:

Abu al-Qasim Hamdi study 20004, entitled: "Developing the competencies of individuals and their role in supporting competitive advantage of the institution - a case study of the Bank of Agriculture and Rural Development in Laghouat.

This study revolved around the extent to which competency development contributes to achieving the competitive advantage of organizations, that is, studying the relationship between competency development and competitive advantage.

Results:

The development of human resources competencies plays a major role in supporting the competitive advantage of the organization

Creativity prior studies

English studies:

The Effect of Creativity Model for Creativity Development in Teachers by (Hosseini, 2014)in faculty of humanities Tehran- Iran.

This paper examines creativity as an educational approach, reviews related theories and patterns of creative learning, and discusses teaching creativity to teachers in general, as well as Iranian teachers in particular. A portion of this research looks at how the program and the pattern of creativity development affect teachers' abilities. Analyzing data

Sample: 120 primary school teachers were randomly from 19 region of Tehran.

Research Hypothesis: Creativity education program will lead to an increase in creative teaching skills of teachers.

Objectives of the study: Assess the effectiveness of creative education programs (Creativity Growth Model) In terms of providing creative skills Teaching is one of the main goals of research

Results: The results show that educational programs and creativity growth models have improved teachers' creative teaching skills.

One of the reasons for the success of this model is the consideration of different effective elements in education and teaching.

In addition to the psychological aspects, considering the emotional, cognitive, social and physical aspects of the classroom, it provides suitable opportunities for teachers to adopt creative teaching methods more appropriately.

In response to an open-ended question about the model's impact on their teaching abilities, they stated that after becoming familiar with it, they promoted a creative environment in their classrooms. As a result, students were more engaged in class and in class activities, and they were more motivated.

Arabic studies:

Creativity in the Algerian government sector: Obstacles and creative stimuli in the industrial zone of Ghardaia this study was conducted at Faculty of Economics and Management Sciences, University of Laghouat.by Dr houari Maradj and Dr khalil Abderezak

The aim of the study is to examine managers' attitudes toward the availability of creative stimulants (managerial styles, organizational situation, creativity, support, supervisor, freedom, recognition, and challenge) as well as creative obstacles (insufficient time, status quo, political problem, and evaluation pressure) in the public sector of Ghardaia's industrial areas, insufficient financial resources, job situation, and law and rules), as well as the availability of creativity manager characteristics.

The study also aims to investigate the statistical differences between the availability of creativity stimulants, obstacles, and characteristics, as well as their relationship to manager personal characteristics.

Results:

Based on the previous analysis of the answers to the study questions, the following results were reached:

The study revealed the availability of creativity stimuli for managers in the industrial sector of the region of Ghardaia to a medium degree, and the most important motivators were: Confidence of the superiors in their subordinates to carry out their duties without the need to supervise them, and with appropriate work rules and instructions in area, as well as the attention of superiors.

The least available motivators with the ideas and suggestions presented by the subordinates were: the absence of affiliation in the organization.

The relationship of the current study with previous studies:

Through the review of previous studies there wasn’t a study that treated both competency and creativity at once unlike our study.

What distinguish our study from other studies is that we tried to link competency and creativity and demonstrates and hidden relation between them according to our problematic.

Ofcourse all previous studies contributed to the fulfillment of this study directly and indirectly

Chapter 2

The Practical Framework of the study

The Practical Framework of the study

chapter introduction:

After discussing the previous chapters, this one contains an introduction to the higher education system and university of Saida the concept of teaching, teacher competence and teacher creativity in higher education.

The practical framework of the study was conducted at the faculty of arts and languages, faculty of human sciences and psychology, science and technology faculty at the university of Saida. The objective is to measure competency and creativity by a randomized survey of a statistical sample of university teachers.

- An overview of Saida university, Dr Moulay Tahar:

1-1-Higher education and the scientific research in Algeria:

The constitution of Algeria stipulates that the state is the organizer of the education system, free education is right and guarantee to all Algerians, and thus basic education is compulsory. The executive decree of the 29th of August 2003 modified by the executive decree of the 27th of September 2007 regulates the organization and the functioning of higher education institutions. Algeria has a diverse range of university types, ranging from universities to higher education institutions.

University centers and higher national schools are all part of higher education. In addition, the university of continuing education was founded in 1990 with the goal of allowing non-baccalaureate students to attend university and earn a diploma.

The university sector follows compulsory education, which lasts until the age of seventeen. The sector has undergone two major reforms: the 1971 reform, which changed the structure of universities from institutes to faculties, and the LMD reform, which began in 2004 and ended in 2010. The reform marked the transition from a degree-based system to a license-based system, (reduced from 4 to 3 years of study) with the Master's degree taking the place of the Magister and the doctorate. This section will provide an overview of Moulay Tahar Saida University, including a presentation of the university's stages of development, as well as quantitative statistics on the number of permanent professors and the pedagogical structures available at the university level.

1-2 development phases of Saida university:

According to Decree No. 86/254 dated 07/10/1986 to form secondary education professors in the basic public sector, higher education in Saida opened its doors in 1986, after transforming the administrative training center into a general school for teacher training.

Because of its strategic location, Saida state is regarded as a window to the south and a close neighbor to the coast of the north It was unavoidable that it would have to grow and expand in order to appeal to everyone.

According to Decree No. 98/222, the region had baccalaureate holders.

It was converted into a university center on July 7, 1998, with three institutes:

Institute of Exact Sciences. Electro-Technical Institute. Irrigation Institute.

as stated in Executive Decree No. 06/256 dated August 6, 2006, the university center has grown to include 05 institutes, each of which houses a group of departments:

• Science and Technology Teaching Assistant.

• Institute of Natural and Life Sciences.

• Institute of Letters and Languages.

• Institute of Legal and Administrative Sciences.

• Institute of Economic and Commercial Sciences and Management.

Competency in teaching:

“Competencies are those characteristics- knowledge, skills, mindsets, thought patterns, and the like-that, when used either singularly or in various combinations, result in successful performance” (Duboi, 1998).

according to (Jackson, 1990)"Competencies are the skills and knowledge that enable a teacher to be successful. To maximize student learning, teachers must have expertise in a wide-ranging array of competencies in an especially complex environment where hundreds of critical decisions are required each day.

Professionalism and fairness

effective communicator, a good listener and a good speaker

adaptable to the environment is a must for survival.

Focus on collaboration and involving the whole class in the work.

Responsible and encouraging on making error and mistakes in the learning process.

Facilitate access to the information and provide students with best high quality of education.

Empathy and friendliness toward students

Tolerance, patience and comprehensive

Progressive, motivational, creative and passionate.

Research Methodology.

The present study is a comparative and descriptive method in term of data collection and an applied research in terms of the purpose of the study. The research was carried out during the period extending from February 2020 to July 2020.

Sample selection and Size. This study is conducted at the university Dr. Moulay Tahar Saida in Algeria. A number of teachers has been chosen as the population of this study since they are considered the core base of implementing competency and creativity in the university.

the questionnaire was printed and distributed to the sample, and through personal e-mails.

Objective boundaries: The study aims mainly at evaluating competency development and creativity realization at university teachers, The questionnaire was distributed within the university located in the state of Saida, Algeria.

Human limits: This study is based on the opinions and answers of 50 randomly selected teachers.

Time limits: the field study took a duration of 2 months

Questionnaire design: the questionnaire was distributed among university teachers and they were asked to comment on it. The questionnaire consists of 20 questions divided into two parts. The questions are answered on a five points Likert Scale.

• The first part of the questionnaire includes 4 personal questions: Sex - age – professor rank – teaching - experience.

• The second part consists of 10 questions based on the characteristics of competency in teaching

• The third part consists of 10 questions based on the characteristics of creativity in teaching

This study contains two main variables which are competency and creativity and it was treated by SPSS software "Statistical Product and Service Solutions version 23"

Statistical methods used: To answer the research questions and test the validity of the hypotheses, descriptive and analytical statistical methods were

used using the program (spss.v23), which consists of a descriptive statistical scale to describe the study population, depending on:

1- **The Alpha-Cronbach parameter**: it measures the degree of validity of the questionnaire questions and it takes values ranging from zero to one. If there is no consistency in the data, the value of the parameter is equal to zero and if there is complete stability of the data, the value of the parameter is equal to one.
2- **Percentages and Frequencies**: To describe the responses of the study population.
3- **Arithmetic averages and standard deviation**, in order to answer the questions of the study and know the relative importance of each paragraph of the study.
4- **Correlation coefficient**: Correlation coefficients are used to measure the degree of correlation between two variables to measure the quality and degree of relationship between the study variables.
5- **Simple linear regression test**: this aims to identify the relationship between the independent variable and the dependent variable, by relying on the coefficient of correlation R, to clarify the type of relationship between the two variables

Sample selection and size:

This study is conducted at the university of Dr. Moulay Tahar Saida, and the teaching staff (regardless of their rank) has been chosen as the population of this study. Out of total number of the population, we randomly choose the sample to be 70 respondents.

Then, the questionnaire was printed and distributed to the sample. Out of a total of 70 respondents, a total of 60 were appropriately filled out and suitable for the statistical study. Thus, the response rate is 80%.

Study variables:

This study has identified two variables, competencies of a university professor as independent variable and creativity of a university professor as the dependent variable.

Study tools:

1- Observation.

2- Questionnaire: it was distributed among an expert group and supervisor they were asked to comment on it and the recommended modification were

implemented. The questionnaire consists of different style questions, including multiple choices and a five-point Likert Scale.

- The first part includes four demographic and personal questions (gender, age, professor rank, experience).
- The second part consists of questions related to the first axis, 10 questions relating to competencies of a university professor.
- The third part is 10 questions relating to creativity of a university professor making the second axis.

The questionnaire was treated by SPSS software and every item was measured by five points Liker Scale as shown in the table below:

Table 4 : five points Likert Scale.

Description	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Likert Scale	5	4	3	2	1

To determine the length of the cells of the five-points Likert Scale, we calculate the range (5-1=4) then we dived on the number of cells (4/5=0.8). we get the table below :

Interval	5- 4.20	4.19 – 3.40	3.39 – 2.60	2.59 – 1.80	1.79 – 1

Findings and Discussion.

a. Reliability and Validity

To verify the validity of the study instrument, the researcher used Alpha-Cronbach coefficient. The value of Alpha Cronbach 78% is considered a good percentage (>0.7) for the purpose of generalizing the results of the study. The Cronbach coefficient is presented in the following table:

Table 6: Alpha-Cronbach coefficient

Reliability Statistics

Cronbach's Alpha	N of Items
,783	20

Source: Prepared by student.

Alpha-Cronbach coefficient for the study variables:

1- Independent variable: competencies of a university professor.

Table 7 : Alpha-Cronbach coefficient for ind.variable

Reliability Statistics

Cronbach's Alpha	N of Items
,566	10

From the table above, we notice internal consistency of the first axes and the value of Cronbach is 56%.

2- Dependent variable: creativity of a university professor.

Table 8: Alpha-Cronbach coefficient for dep.variable

ReliabilityStatistics

Cronbach's Alpha	N of Items
,715	10

From the table above, we notice internal consistency of the first axes and the value of Cronbach is 71%.

b. Statistical analysis of questionnaire data and hypothesis testing.

1- Analysis of the personal information of the sample members:

This is by analyzing the personal and job characteristics of the respondents according to the variables: gender, age, experience, professor ranks**.**

According to gender:

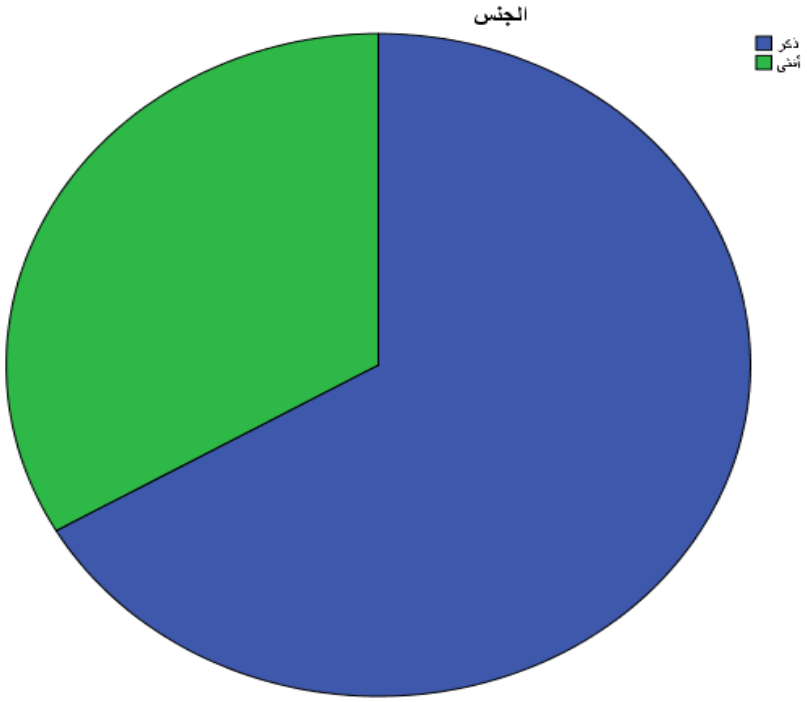
Table 9: Distribution of sample individuals according to gender

Gendre	Frequency	Percentage
Male	**40**	**66.7**
Female	**20**	**33.3**
Total	**60**	**100%**

Source: Prepared by student, depending on the output of spss

Through the table above, for the information related to gender, it is clear to us that the sample includes 40 individuals are males by 66,7% and the rest are females by 33.3% .

Figure 1: distribution of sample individuals according to gender



According to age

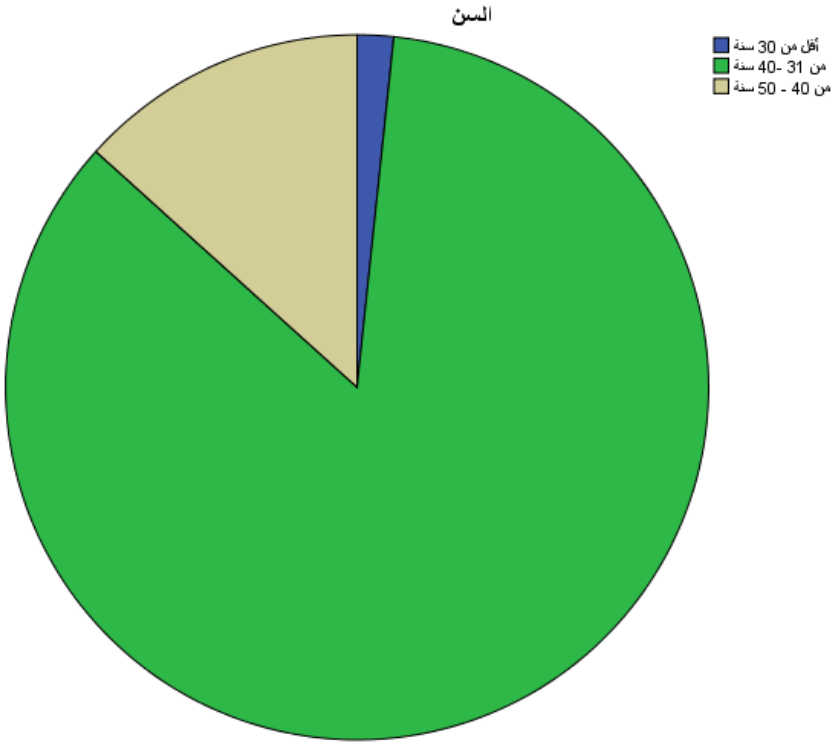
Table 10: Distribution of sample individuals according to age

Age	frequency	Percentage
less than 30 years	01	1.7
from 31 to 40 years	51	85
from 40 to 50 years	08	13.3
from 50 years and older	00	00
Total	60	100%

Source: Prepared by student, depending on the output of spss

We note that people that are less than 30 years are 1.7%, and the people between the age of 31 and 40 years make 85% of the respondents scoring the highest percentage and including 51 respondents. While the age group from 40 to 50 years with 8 individuals only scored 13.3 %, and the last category of individuals from 50 years and older was nul.

Figure 2: distribution of sample individuals according to age



According to professor's ranks

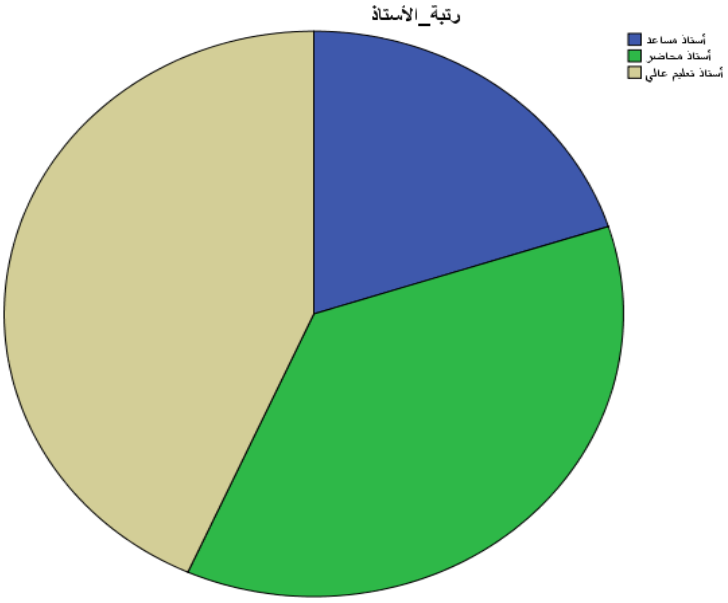
Table 11: Distribution of sample individuals according to professor's ranks

Professor's ranks	freqeuncy	Percentage
Assistant Professor	**12**	**20**
Lecture professor	**22**	**36.7**
Professor of higher education	**26**	**43.3**
Total	**60**	**100%**

Source: Prepared by student, depending on the output of spss

From the table above we observe that Professor of higher education is the highest percentage of ranks 43.3% including 26 professors, and then we have the Lecture professor as the second higher rank consisting of 22 individuals making 36.7 %. Finally, we have the last rank of professors of 20% of Assistant professor.

Figure 3: distribution of sample individuals according to professor's ranks.



According to work experience

Table12: Distribution of sample individuals according to work experience

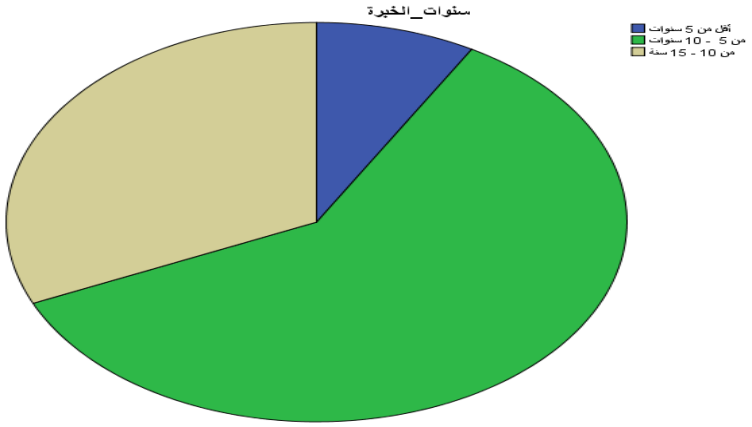
Experience	Frequency	Percentage
Less than 5years	**5**	**8.3**
From 5 to 10 years	**36**	**60**
From 10 to 15 years	**19**	**31.7**
More than 15years	**00**	**00**
Total	**60**	**100%**

Source: Prepared by student, depending on the output of spss

From the table, the variable of work experience has shown that the category of 5 to 10 years of experience scored the highest 60% of the respondents, while the category of 10 to 15 years came in second by 31.7%, and then 8.3% of

individuals have been with the university for less than 5 years, while the category of more than 15 years of experience is non-existent.

Figure 4: distribution of sample individuals according to years of experience.



c. Presentation and analysis of the survey results

Part one: analysis of statements related to the competencies of a university professor

Table13: analysis of respondent's responses to the competencies of a university professor

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Scale
Competencies of a university professor	8.3	11.7	15	40	25	Percentage
	18.3	10	13.3	35	23.3	
	00	10	11.7	56.7	21.7	
	00	1.7	20	46.7	31.7	
	00	8.3	20	50	21.7	
	00	3.3	30	48.3	18.3	

	8.3	5	16.7	58.3	11.7	
	1.7	1.7	18.3	40	38.3	
	3.3	6.7	3.3	58.3	28.3	
	50	11.7	20	51.7	11.7	

Source: Prepared by student, depending on the output of spss

From the table above we remark that most of the respondents responses voted agree relating to university professors competencies, which indicates that they are responsible toward their students and that's from their passion to teaching and their ability to perform under pressure.

Part two: analysis of statements related to the creativity of a university professor

Table 14: analysis of respondent's responses to the creativity of a university professor paragraphs

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	scale
Ceativity of a university professor	36.7	46.7	05	11.7	00	Percentage
	21.7	45	18.3	11.7	3.3	
	18.3	50	28.3	3.3	00	
	30	45	13.3	11.7	00	
	25	33.3	16.7	20	05	
	18.3	43.3	21.7	13.3	3.3	
	43.3	21.7	11.7	21.7	1.7	
	23.3	45	25	6.7	00	
	30	41.7	20	8.3	00	
	33.3	30	13.3	20	3.3	

Source: Prepared by student, depending on the output of spss

From the table above we remark that most of the respondent's responses are agreeing to the university professor being creative.

Part three: sample response trends.

Table 15: the trends of respondent's responses to the axis of the competencies of the university professor

Dimension	Mean	SD	General direction
You have great passion and love for the subject that you teach	2,3833	1,22255	Agree
You have the necessary cognitive skills to teach	2,6500	1,42407	Agree
You have the behavioral and pedagogical skills necessary for teaching	2,1000	,85767	Disagree
Your student feel free to ask questions, discuss and inquire	1,9167	,76561	Disagree
You tend to highlight the most points and goals of a lecture without neglecting the details	2,1500	,86013	Disagree
You have high concentration and the ability to attract the student attention	2,1833	,77002	Agree
The exam mark is an indication of the student's level and competence	2,4000	1,04476	Agree

Always trying to modernize teaching methods and information transfer	1,8833	,88474	Agree
You have the ability to simplify what is complicated for your student	1,9833	,94764	Agree
In light of internal and external pressures, you focus on your goals and priorities as a teacher	2,4667	1,01625	Agree
Competencies of a university professor	**2.21**	**0.979**	**Agree**

Source: Prepared by student, depending on the output of spss

The table above show that the means of respondents responses to the competencies of a university professors ranged between 1.88- 2.68 with most respondents voting agree.

The axis of the competencies of a university professor got a mean of 2.21 and standard deviation of 0.979.

Concerning the first two sentences most respondent's responses tended toward agreeing, while it went toward disagreeing when it came to "you have the behavioral and pedagogical skills necessary for teaching", your student feel free to ask questions, discuss and inquire, and you tend to highlight the most points and goals of a lecture without neglecting the details. Furthermore, the responses tended more again toward agreeing to the rest of the phrases.

Table 16: the trends of respondent's responses to the axis of the creativity of the university professor

Dimension	Mean	SD	General direction
You are curious about your surroundings	1,9167	,94406	Agree
The ability to adapt to new situations and problems	2,3000	1,04638	Strongly agree
You enjoy doing your work	2,1667	,76284	Strongly agree
You have high sensitivity to your environment and surroundings and the changes that occurs in it	2,0667	,95432	Strongly agree
You feel the gaps in the process of communication and information transmission and you work to	2,4667	1,21386	Agree

reduce them			
Your students often feels motivated and enthusiastic	2,4000	1,04476	Agree
Your way of teaching is fun and exciting	2,1667	1,25099	Agree
You try to overcome obstacles and everything that limits the process of obtaining, transmitting and sharing information	2,1500	,86013	Agree
You use brainstorming or other methods to motivate your students to be creative	2,0667	,91812	Agree
Rarely and at unexpected times, you you find solutions or concepts to things that you could not solve or understand beforehand	2,3000	1,22544	Agree
Creativity of a university professor	**2.20**	**1.022**	**Agree**

Source: Prepared by student, depending on the output of pss

The table above show that the means of respondents responses to the creativity of a university professor paragraphs ranged between 1.91- 2.46with most respondents voting agree.

The axis of the competencies of a university professor got a mean of 2.30 and standard deviation of 1.22.

d. Testing the hypotheses:

In this section we test the study hypotheses to determine the relation between the independent variable and the dependent one.

And to achieve that, we used correlation (Pearson) analysis. If the Pearson value is <0.05 the correlation is not significant, and when the value is >0.05 the correlation is significant.

The first main hypothesis: there is a relation between Saida university professor competencies and his creativity**.**

Table 17: the relation between Saida university professor competencies and his creativity

Correlations

		total	Professor competencies	Professor creativity
Total	Pearson Correlation	1	,878**	,919**
	Sig. (2-tailed)		,000	,000
	N	60	60	60
Professor competencies	PearsonCorrelation	,878**	1	,617**
	Sig. (2-tailed)	,000		,000
	N	60	60	60
Professor creativity	Pearson Correlation	,919**	,617**	1
	Sig. (2-tailed)	,000	,000	
	N	60	60	60

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Prepared by student, depending on the output of spss

Through the table, we note that the correlation coefficient between professors competencies and their creativity is 61.7% with a significant (sig=.000) which means it is less than 0.01this indicates the existence of a relation between the variables. Thus, there is statistically significant correlation coefficient between competency and creativity, and the more the professor was competent the more he was creative.

Table 18: the results of relation between Saida university professor competencies and his creativity

Relation direction at significant0.01	Level of significats	The value of the correlation coefficient	Variables
statistically significant	0.000	0.878	Professor competency
statistically significant	0.000	0.919	Professor creativity

Source: Prepared by student, depending on the output of spss

According to the table there is statistically significant correlation coefficient between competency and creativity, thus, we accept the hypothesis that sates that there is a relation between professor competencies and his creativity.

Testing the hypothesis that states there is statistically significant effect between competency and creativity of Saida university professor.

Regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,617[a]	,380	,370	,35805

a. Predictors: (Constant), professor creativity

It can be seen from the table that the value of the correlation coefficient R = 0.617and this indicates the existence of a moderate correlation between the professor competency and the professor creativity, and the value of the determination coefficient is R s=0.380, which means that significant correlation coefficient between competency and creativity.

Anova analysis :

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4,566	1	4,566	35,616	,000b
	Residual	7,436	58	,128		
	Total	12,002	59			

a. Dependent Variable: professor-competency

b. Predictors: (Constant), professor-creativity

Source: Prepared by student, depending on the output of spss

Through the table of anova, it is clear that the significance level sig = 0.000 which is less than 0.05 the approved level of meaning adopted, and for this we accept the hypothesis that sates that there is a relation between professor competencies and his creativity.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,094	,193		5,674	,000
	Professor creativity	,508	,085	,617	5,968	,000

a. Dependent Variable: professor competency

After we found that there is a correlation between the two variables, we decided to increase the relationship to the degree of prediction, by using regression to study the relationship between the dependent variable and the independent variable.

The regression equation between the independent variable and the dependent variable: Y= B+ Ax1

where: b is a constant, A is a variable

Y= 1.094+0.508x

The second main hypothesis: Statistically there is a significant effect that Saida university teachers are constantly developing their competency

H0: There is no statistically significant effect that the university professor at Saida University is constantly working to develop their competencies

Template Summary

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	,878[a]	,770	,766	,21741

a. Valeurs prédites : (constantes), Professor Competency.

H1: There is a statistically significant effect that the university professor at Saida University is constantly working to develop their competencies

Coefficients[a]

Modèle		Coefficients non standardisés		Coefficients standardisés	T	Sig.
		A	Erreur standard	Bêta		
1	(Constante)	,272	,142		1,919	,060
	professor creativity	,875	,063	,878	13,935	,000

a. Dependent variable: overall dimension

After we have calculated the correlation coefficient between the overall dimension and the axis of the competencies of the university professor, the contribution of the relationship model was tested using F, and then calculating the percentage that the variable (the total dimension) explains in the change in the degree of contribution as a dependent variable, using R2, then making sure of the significance of the effect of this variable. overall dimension) on the contribution to achieving the development of competencies using the T-test

Looking at the table, it is clear that there is a statistically significant correlation at the level of 0.01 on the presence of a correlation between the effect of the total dimension in developing competencies continuously, as the regression coefficient is 0.878, which is a statistical function

Form summary and parameter estimates
Dependent variable: overall_dimension

Equation	Récapitulatif des modèles					Estimations de paramètres	
	R-deux	F	df1	df2	Sig.	Constante	b1
Linéaire	,770	194,192	1	58	,000	,272	,875

independent variable: professor competency

The value of the test (F = 194.192) was statistically significant because the value of the significance function Sig=0.00 which is less than the level of the approved moral function 0.05, and therefore the acceptance of this model in predicting the relationship between the professor's competencies and its continuous development, which makes us reject the null hypothesis and accept the alternative hypothesis, which says that there is a statistically significant effect of the university professor in developing his competencies, and it is statistically significant at the level of significance 0.01 and indicates the degree of the professor's contribution to constantly developing his competencies and the validity of relying on the results of the model without errors, and the value of R2 = 0.770 indicates that the university professor explains the change in the development of competencies Approximately 77% and the remaining 23% are explained by other factors in addition to random errors resulting from the accuracy of sample selection and the accuracy of units of measurement and others.

The third main hypothesis: Statistically there is a significant effect that Saida university teachers have creative characteristics and work creatively.

H0: There is no statistically significant effect that the university professor at Saida University is working to achieve creativity

H1: There is a statistically significant effect that the university professor at Saida University is working to achieve creativity

Template summary

Model	R	R-two	Adjusted R-two	Standard error of estimate
1	,919[a]	,844	,841	,17903

Template Summary

Model	R	R-two	Adjusted R-two	Standard error of estimate
1	,919[a]	,844	,841	,17903

a. Predicted values: (constants), professor creativity

Coefficients[a]

Model		Non-standarised coefficients		Standardized coefficients	T	Sig.
		A	Erreur standard	Bêta		
1	(Constant)	,547	,096		5,674	,000
	Professor creativity	,754	,043	,919	17,718	,000

a. Dependent variable: overall dimension

Model summary and parameter estimates

Dependent variable: overall dimension

Equation	Template Summary					Parameter estimates	
	R-deux	F	df1	df2	Sig.	Constant	b1
Linear	,844	313,927	1	58	,000	,547	,754

The independent variable is creativity of the teacher

After we have calculated the correlation coefficient between the overall dimension and the axis of creativity of the university professor, the contribution of the relationship model was tested using F, and then the percentage explained by the variable (total dimension) in the change in the degree of contribution as a dependent variable, using R2, then making sure of the significance of the effect of this variable. overall dimension) on the contribution to the work achieve the achievement of creativity using T-test

Looking at the table, it is clear that there is a statistically significant correlation at the level of 0.01 on the existence of a correlation between the effect of the total dimension in work on achieving creativity, as the regression coefficient is 0.919, which is a statistical function

The value of the test (F = 313.927) was statistically significant because the value of the moral function 00.0 = Sig which is less than the level of the approved moral function 0.05, and thus accepting this model in predicting the relationship between the university professor and work to achieve creativity, which makes us reject the null hypothesis and accept the alternative hypothesis, Which is there is a statistically significant effect of the university professor at work on achieving creativity, and it is statistically significant at the level of significance 0.01 and indicates the degree of the professor's contribution to achieving creativity.

The validity of relying on the results of the model without errors, and the value of R2 = 0.844 indicates that the university professor explains the change in the development of creativity by approximately 84.4%, and the remaining 15.6% are explained by other factors in addition to the random errors resulting from the accuracy of sample selection and the accuracy of units of measurement and others.

View and discuss results

The university professor believes that his competencies and skills are developed permanently and continuously, whether it is as a result of his own development or as a result of the university's efforts to develop the competencies of its teachers by providing opportunities for training abroad or within the university in all fields, but checking the reality facts and through published statistics we find that Saida University does not occupy the first positions in the ranking of the best universities at the national level, and isn’t considered as competent or creative university which leads us to question a big why.

The university professor believes they has a creative spirit and the characteristics of the creative personality, as he sees himself to innovate in teaching methods and information transfer process to students, and believe they are creative in performing their tasks but when researching the indicators of creativity in Saida university we do not find that the university has obtained a patent and did not register any creative project.

There is a positive relationship between the development of competencies and the achievement of creativity and this seems very logical since creativity is a mental process that requires unusual

thinking skills and the latter cannot be reached without a rich knowledge balance and without working to develop the thinking skills of individuals and develop their knowledge in a certain domain which means one must be competent in order to be creative. The high education system of Algeria provides professors to get training days and formations at high-quality universities in order to level up in their domain, which mean they gain more knowledge, more competence that should be reflected and shared and developed within their own class.

Chapter conclusion:

This chapter includes a presentation of the study's methodological framework, as well as a presentation, analysis, and discussion of the study's findings following the data collection process, with the primary goal of highlighting the factors affecting creativity and competency in university teachers, Through an applied study, we project the theoretical side to the practical side, learning about the reality of realizing creativity and competency development in Saida university Dr Moulay tahar.

Conclusion

Conclusion:

Competent and creative professor results in creating a competent and creative university so basically a university with high quality processing system (education presented to the students) will have high quality outputs (competent and creative students) but this isn't the case in the university of Saida.

Concerning Saida university professor we have reached the following results

As for the first main hypothesis, which resolves around the *relation between Saida university professor competencies and his creativity.* the value of the correlation coefficient R = 0.617 which indicates the existence of a moderate correlation between the professor competency and the professor creativity, and the value of the determination coefficient is R s=0.380, which means that there is a significant correlation coefficient between competency and creativity.

the significance level sig = 0.000 which is less than 0.05 the approved level of meaning adopted, for this we accept the hypothesis that sates that there is a relation between professor competencies and his creativity.

As for the second main hypothesis, says that there's statistically a significant effect that Saida university teachers are constantly developing their competency.

there is a statistically significant correlation at the level of 0.01 on the presence of a correlation between the effect of the total dimension in developing competencies continuously, as the regression coefficient is 0.878, which is a statistical function

the level of significance 0.01 and indicates the degree of the professor's contribution to constantly developing his competencies, The value of the test (F = 194.192) was statistically significant because the value of the significance function Sig=0.00 which is less than the level of the approved moral function 0.05, which makes us reject the null hypothesis and accept the alternative hypothesis

As for the third main hypothesis, which says that there's a significant effect that Saida university teachers have creative characteristics and work creatively

We found that statistically there's a significant correlation at the level of 0.01 on the existence of a correlation between the effect of the total dimension in work on achieving creativity, as the regression coefficient is 0.919, which is a statistical function

Conclusion

The value of the test (F = 313.927) was statistically significant because the value of the moral function 00.0 = Sig which is less than the level of the approved moral function 0.05, hence we accept the alternative hypothesis and reject the null hypothesis.

According the study of this research Saida university professor are indeed competent and creative, that means Saida university should be competent and creative university, but in reality Saida university is ranked 4267 world-wide according to **www.webometrics.info**, with 0 contribution to creative achievements, and low-quality outputs of students.

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Appendix

University of Dr. Moulay Tahar -Saida-

Faculty of Economic Sciences, Management Sciences and Commercial Sciences

Master Degree In: Business Management

Questionnaire survey of Developing Competencies and Achieving Creativity for the university professor

A survey of a sample of Saida University professors

Hello,

In preparation for our master's thesis as a master student in the department of Business Management at the Faculty of Management Sciences at Saida University for the academic year 2020/2021, we put in your hands this questionnaire through which we aim to know your views on the issue of Developing Competencies and Achieving Creativity for the university professor.

Your honest and sincere answers to the questions of this form will contribute to obtaining important and accurate results that enhance the achievements of the research goals. Each answer will be used for scientific research purposes only and it will be compeletly anonymos.

Accept my highest respect and appreciation.

Made by : Aouad Farouk Under supervision of : Dr. Abdelli

Remark : please read the following statments carefully and answer by (x) in front of the suitable answer.

Personal information :

- **Gender :**

Male ☐ Female ☐

- **Age :**

Less than 30 years ☐ from 31 to 40 years ☐

From 40 to 50 years ☐ older than 50 years ☐

- **Professor rank :**

Assistant Professor ☐ Lecturer Profesor ☐

Professor of higher education ☐

- **Experience :**

Less than 5 years ☐ from 5 to less than 10 years ☐

From 10 to less than 15 years ☐ from 15 years and more ☐

The first axis Competencies of a univrsity professor						
Number	Expression	Strongly agree	Agree	Neutural	disagree	Strongly disagree
1	You have great passion and love for the subject that you teach					
2	You have the necessary cognitive skills to teach					
3	You have the behavioral and pedagogical skills necessary for teaching					
4	Your student feel free to ask questions, discuss and inquire					
5	You tend to highlight the most points and goals of a lecture without neglecting the details					
6	You have high concentration and the ability to attract the student attention					
7	The exam mark is an indication of the student’s level and competence					
8	Always trying to modernize teaching methods and information transfer					
9	You have the ability to simplify what is complicated for your student					
10	In light of internal and external pressures, you focus on your goals and priorities as a teacher					

The second axis Creativity of a univrsity professor						
Number	Expression	Strongly agree	Agree	Neutural	disagree	Strongly disagree
1	You are curious about your surroundings					
2	The ability to adapt to new situations and problems					
3	You enjoy doing your work					
4	You have high sensitivity to your environment and surroundings and the changes that occurs in it					
5	You feel the gaps in the process of communication and information transmission and you work to reduce them					
6	Your students often feels motivated and enthusiastic					
7	Your way of teaching is fun and exciting					
8	You try to overcome obstacles and everything that limits the process of obtaining, transmitting and sharing information					
9	You use brainstorming or other methods to motivate your students to be creative					

10	Rarely and at unexpected times, you you find solutions or concepts to things that you could not solve or understand beforehand					