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Effect of Teachers' Creativity on Academic Achievement of University Students

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Abstract

Main objectives of this study were to find out effect of creativity of teachers on academic achievement of university students. The ability to create a new product that is both original and suitable for a given situation is known as creativity. A descriptive study design employing the cross-sectional survey method was used to accomplish the aforementioned goals by enabling a quantitative description of the pertinent elements of the data that were gathered. The study's population is made up of 60 instructors and 669 students at Kotli University and 40 instructors and 986 students at WUAJK University. There are 100 teachers and 100 students in the study's sample tool utilized to gather the data. The tool which was utilized to collect data was structure questionnaire. A separate one for each teacher and student. On the data inspection, conclusion revealed how important creativity is in the classroom for improving students' focus and attention, helping them learn while having fun, developing emotionally, thinking more critically, and solving problems. All of these benefits have an impact on academic performance. University students' academic success is influenced by teachers who cultivate their creative skills. University students' academic performance is positively impacted by teachers' innovative teaching methods. All professors should receive in-service training from the university administration on how to cultivate creative skills, as this would improve students' academic achievement. The administration of the university should plan programs to educate and raise awareness among instructors and students about the value of creativity in the classroom and how it affects students' academic success.

INTRODUCTION

Nwankwo (2018) states that the creation of a new product that is both original and suitable for a given situation is a widely recognized definition of creativity. A person can be creative in many different ways, and being creative is not defined by a single set of traits. Rather, a lot of experts consider creativity to be a set of abilities and mindsets that everyone may possess, like the ability to tolerate ambiguity, redefine old problems, come up with new problems to solve, take calculated risks, and follow an inner passion.

Amadi (2016) reports that several psychologists and educators argue that creativity skills are psychological and that imaginations are intellectual qualities required for success in the field. Universities therefore have a responsibility to value and instruct them. Additionally, creativity directly improves learning through raising motivation, enhancing comprehension, and fostering joy. In order for pupils to be creative, they must be motivated by significant goals they are pursuing on an internal level.

As Haberle, V., & Stark, A. (2018) notes in her book *Creativity in the Classroom*, learning inquiry, problem-solving, and investigating many choices are all tactics that foster creativity and also promote depth of understanding. He has maintained that academic achievement alone cannot predict university success; creativity can do so. Creativity can predict university success beyond the results of standardized tests. Beyond scholastic success, creativity can add enjoyment to the learning process, causing pupils to feel happy and emotionally engaged. Being creative is more than just coming up with new ideas or creating art; it's about living creatively. Students will follow the lead of teachers who can articulate their thoughts, interactively interact with the material, and exhibit innovative thinking. Whether teaching drawing, math, art, biology, music, politics, theatre, or any other subject where positive emotion and enthusiasm are contagious and known to foster creative ideas, students need to witness professors who share these hobbies. He says that even just once a day, doing anything creative like knitting, designing, playing an instrument, or sketching might help you feel happier. You will be sustained by this optimistic outlook, which will also benefit the students. Any organization, team of employees or individual's survivability is largely dependent on their level of creativity. Due to the nature of today's marketplaces, university lecturers are in high demand for fresh perspectives on how to come up with original ideas. The drive to create goods and services that are more appealing is also growing. Thus, including creativity into educational services is essential for instructors to thrive in the twenty-first century. To carry out their duties in an effective and efficient manner, instructors must possess a greater level of inventiveness. Since showcasing talent requires a creative mind, educators must be creative.

"Creativity" can be applied to any new idea presented in the classroom, according to Ikoja-Odongo (2011), and these concepts allow for issue solving. Human development aims to empower society's members to think creatively and innovatively, which will inspire them to take action toward the advancement of human potential. An individual's degree of self-reliance to enhance the worth of his or her own life, family, community, group, and society will increase with creativity and innovation. One of the most important human abilities is creativity. It is

generally accepted that the best thing a country can do to aid in its citizens' growth is to impart to them the skills necessary to be more inventive and creative. This is due to the fact that thinking quality determines the quality of the human future. Being creative enables people to access the best resources and experiences possible. Teaching organizations, professions, and the environment in which they carry out their professional obligations will all be propelled by creativity, which is the means of dynamic change, leap forward, and surprise. The ability to generate original, useful ideas on one's own is the essence of creativity.

According to Atabek (2020), these are the most crucial and real abilities required for success in the twenty-first century. El Melegy, Mohiuddin, Boronico, and Masher (2016) state that creativity is primarily an individual experience that utilizes factors like personality, motivation, and level of skill. They disclose how certain organizational structures, such as formalization, centralization, and labour specialization, have a negative impact on worker creativity. Particularly, employees' creativity decreases with increasing organizational structure centralization, and employees' creativity significantly decreases with increased organizational formalization.

According to Adeel and Pengcheng (2016), firms are substantially investing in the creativity development of their personnel due to the distinct advantages that creativity offers to individuals. Organizations in a number of significant sectors. This is because an organization's performance, success, and ability to endure are now greatly influenced by innovation.

Any institution that wants to survive needs to be creative. According to Slater, and Tomas (2008), both internal and external factors can have an impact on an individual's capacity for innovation and personal growth. According to Soheili, (2015), enhancing the association's viability and execution is one of the main goals of any creative endeavor. When organizational innovation rises, this can be accomplished. Olajide(2013) emphasizes that as research on creativity has advanced, the notion that creativity is a talent that only a select few possess has given way to the view that creativity potential is a personal quality. Despite the widespread belief that internal elements alone determine creativity, external influences have a significant impact on employees' capacity for creative output in any university. The tendency of creativity to emerge in unexpected places is one of its defining characteristics. This is due to the fact that it frequently happens unexpectedly during brainstorming sessions where people gather to find answers to problems that have been recognized. But one needs to start with a specific issue. This is due to the fact that it will be challenging to generate fresh ideas without a challenge to address, even when creativity-boosting techniques are used (Beghetto 2010).

According to Jantz (2013), most creative acts are unexpected and creativity is closely associated with a large element of surprise. Consequently, one may not know in advance who will participate in a creative act, what the act will entail, when it will occur, or how academic success shows the extent to which a learner, teacher, or organization has achieved their short- or long-term learning goals. Reaching benchmarks in education, such finishing senior secondary school, is measured academically by diplomas and bachelor's degrees. Academic accomplishment is commonly measured through exams and continuing assessments, but

opinions on the most effective ways to measure it and what counts most declarative knowledge like facts or procedural knowledge like skills differ (Annie, 2016).

OBJECTIVES

1. To identify the creativity of teachers of Faculty of social sciences of women university Bagh and university of Kotli.
2. To find out effect of creativity of teachers on academic achievement of students of women university Bagh and university of Kotli.

REVIEW OF LITERATURE

DEVELOPMENTAL PSYCHOLOGY

The theories around creativity are as diverse as the concepts of creativity, which are also non-unanimous. The concept of creativity has existed ever since the days of Aristotle and Plato, and philosophers like Dewey, Wallas, and Kohler brought it back to light in the 1920s. Psychologists continued to focus on creativity throughout the 20th and 21st centuries, and a variety of contemporary theories are still inspired by it today. Sternberg (2010) categorizes the primary drivers of creativity into ten distinct domains, which comprise cognitive, stage-and conceptual, developmental, psychometric methods. Furthermore, it is separated into six categories in her 2004 book *Understanding Creativity*: developmental, cognitive, educational, humanistic, psychometric, and affirmative. Developmental, social, and cognitive psychology is the categories into which the ideas being examined have been divided for the sake of this study and to facilitate understanding. These domains were selected on the basis of their capacity to distinguish the ways in which creativity is fostered through surroundings (social), across time (developmental), and cognitively (Runco, 2010). Developmental psychologists' viewpoints regarding the expansion of creativity and creative psychology of development. Within the field of developmental psychology, perspectives mostly center on the developmental phases of the creative individual. According to Piirto (2004), "Stage theory is the process of expressing creativity across time. Gruber noted in his 1974 research that artist's frequently early drafts or concepts for works from a young age. Creative persons frequently have early ideas or sketches for their works when they are still young. He went on to say that creativity is the product of years of labor over a lifetime, not just one instant. In Piirto's 2004 article, Gruber elaborated on how systems change over time by "discussing facets such as networks of enterprise, uniqueness, pluralism, insight, and evolving belief systems. "Gruber (1981) examined the development of Darwin's theories in *Darwin on Man: A Psychology Study of Scientific Creativity* by looking through his writings and notebooks. Gruber, applying the developing systems method, "recognizes the creative individual both as a constructor of tasks and as a human being interacting with the world, with emotions, aesthetics, and needs," as stated by Starko. Gruber's work, according to Starko (2018) is a system of complex attitudes and techniques that include the following: (a) the notion that play, history, relationships, and interaction influence creative activity; (b) the identification of multiple projects, insights, and 27 metaphors; and (c) the notion that play, chance, and purpose influence development over time.

Developmental theories state that people change in response to their experiences in the outside world (Runco, 2010). This is consistent with Feldman and Goldsmith's (1986) developmental approach, which labeled the produced work as "transformational." This kind of metamorphosis, as defined by Piirto (2004), is novel and beneficial to both the individual and the body of knowledge in a certain sector. Feldman called them "imperative transformations," but he also pointed out that mastery would require skill (Piirto). According to Kozbelt, Beghetto, and Runco (2010) "One of the most useful theories of creativity is the developmental one." According to Kozbelt et al. (2010), developmental theories not only assist us in comprehending the origins of creativity, as indicated by the experiences of individuals who are unquestionably creative, but they also offer guidance on how to create conditions that will allow children to reach their full potential. Therefore, developmental perspectives, which range from mini-c to Pro-c, emphasize people, places, and possibly creative components from mini-c to Pro-c, primarily highlight person, location, and potential elements of creativity.

SOCIAL PSYCHOLOGY

Starko (2018) characterizes Gruber's work as a system of intricate attitudes and techniques that include the following: (a) the idea that connections, history, play, and interaction influence creative activity; (b) the identification of numerous projects, insights, and 27 metaphors; and (c) the idea that relationships, play, and chance influence development over time. In his works, Csikszentmihalyi divides creativity into two groups. First, according to Piirto (2004), a "Big-C" is a person whose contributions are well-known in the field and who has made a major influence on it. Big-C is not the same as "Little-C," or the creativity that people encounter and develop on a daily basis. Children's inventiveness was linked to parents who were not overly controlling and who provided their kids freedom and choice, according to a 1989 study by Albert and Runco. Kozbelt et al. (2010) state that children who reach optimal independence are capable of independent thought and original idea generation. Moreover, Kozbelt et al. (2010) make clear that: Information flows between the layers of a system and affects how actions including creative actions are interpreted. These interpretations define the bounds of acceptable behavior and, conversely, the extent of latitude that allows for originality and inventiveness. According to Albert, a person's conduct and development are genuinely influenced by their interactions with their environment. Significantly, there is a clear relationship between human freedom and system complexity. The field of social psychology also offers an explanation of intrinsic motivation.

A prominent psychologist in this subject, Gardner (1984), is well-known for his studies on multiple intelligences. According to Gardner's theory, creativity contributes to each intelligence's development. According to Starko (2018), Gardner's definition of creativity suggests that creativity is a characteristic a person possesses in a particular area rather than a characteristic in general. Starko (2018) posits that an individual's capacity for creativity in a certain field can be shaped by various factors such as their distinct intelligences, personality traits, social connections, and opportunities within that industry or field. In his 1993 book *Creating Minds*, Gardner enumerated five types of jobs that creative individuals could work on:

solving a particular problem, coming up with a wide conceptual scheme, creating a product, giving a stylized performance, and doing a show for a big crowd. Sternberg is another contemporary psychologist who has investigated cognition and creativity. In his 1986 book *The Triarchic Mind*, Sternberg distinguishes between three types of intelligences: the creative, analytical, and practical. Sternberg called this theory "triarchic" and went on to say that each intelligence consists of investigation, planning, creativity, insight, and the actual act of doing the activity. Sternberg's contemporary methodology is different from Guilford's Structure of Intellect (SOI) concept, which was developed in the 1960s. By the 1980s, his SOI model had undergone numerous modifications and included 180 different categories of cognition. Guilford's distinction between divergent and convergent thinking is still used in research attempting to understand creative cognition, according to Kozbelt et al. (2010). Divergent thinking, according to Kozbelt et al., occurs when associations and thoughts take diverse turns and might result in the generation of original and imaginative ideas. The idea of merging different sets of knowledge, or the theory of conceptual combination, is another cognitive paradigm that has gained greater traction recently. Emergent qualities are the outcome of conceptual conjunction, according to Estes and Ward (2002). According to Estes and Ward's research, connecting two seemingly unrelated ideas through abstract reasoning or metaphorical reasoning increases the likelihood of coming up with an innovative idea. In conclusion, the theory of cognition asserts that metacognitive functions and creative thinking are often connected. Kozbelt et al. (2010) have highlighted the metacognitive nature of tactile thinking and how it can increase the probability of solving issues in novel ways. Concepts like changing perspectives, addressing problems from the opposite direction, and questioning preconceptions can all be part of tactical thinking. These theories are essential foundations for comprehending the nature of creativity and how it influences the creativity of learners. Theories are not as crucial as models of creativity and how it may be developed in order to identify the most effective methods for promoting creativity in the classroom.

CREATIVITY MODELS

In order to comprehend the issue, Getzels (1987) distinguished three categories of issues, which comprised the subsequent: Type 1 problems have a recognized formulation, a recognized approach, and a recognized solution that is known to people other than the issue solver. Type 2 problems are those that are presented in the shape of an issue, but the problem solver is unaware of the approach that will be taken to solve them. Type 3 Problem: No problem is stated; the issue must be found on its own; no one may be aware of the issue or its remedy (Starko, 2018). Csikszentmihalyi and Sawyer (1993) hypothesized that the presentation and discovery of challenges differ across the creative stages. They identified four distinct phases in their work: (a) diligent effort and research leading up to the concept; (b) a period of solitude; (c) an epiphany; and (d) elaboration to bring the idea to reality. (Starko, 2018) While these kinds of tactics have been linked to creativity in thought, a drawback of applying this approach is the amount of time that could be spent on them. Since that a teacher's day is mostly determined by the passage of time, this could have an impact on the classroom. Furthermore, the application of these models

to younger pupils may be dubious because they have primarily been employed with older students.

Data analysis, hypothesis development, and conclusion drawing are the essential elements of inquiry, according to Starko (2018) (a cycle that can be repeatedly completed). Starko contends that learning can occur while students are experimenting with various ways of thinking, exercising critical thought, and undertaking independent research to support their positions. A number of models have been highlighted by the literature as viable approaches to teaching creativity in the classroom, including Understanding Creativity (2004), Nurturing Creativity in the Classroom (2017), and Creativity in the Classroom Schools of Curious Delight (2018). By reviewing these models, a researcher can create a toolkit of resources that educators can use and integrate in their efforts to promote creativity in the classroom through instruction. By reviewing these models, a researcher can create a toolkit of resources that educators can use and integrate in their efforts to promote creativity in the classroom through instruction. Another aspect of the classroom that this examination will focus on is the use of curriculum models that encourage innovation.

METHODS THAT IS CURRICULUM-BASED

Teaching strategies and curriculum are important parts of encouraging creativity in the classroom. Reid (2015) emphasizes that educators must promote creativity across the curriculum in order to help their students develop into capable and contributing members of society. A variety of curriculum approaches are available for use in the classroom to help students learn about and engage with creativity. This section will look at several methods teachers might implement to encourage creativity in the classroom. Renzulli (2017) asserts that conventional classroom instruction does not offer predetermined answers to the issues that humanity faces. As an alternative, educators should provide students and themselves the freedom to explore, exhibiting this imaginative behavior for their students, and letting students engage with the material by thinking through a variety of options and possibilities (Renzulli, 2017). In his analysis of the connection between curriculum and creativity, Starko (2018) outlined four essential rules that educators should adhere to while trying to encourage creativity in the classroom.

PROFESSIONAL DEVELOPMENT AND CREATIVITY INSTITUTIONS

Despite prior acknowledgments of the significance of creativity, there seems to be a dearth of professional development opportunities and initiatives devoted to fostering creativity. This evaluation examined two programs that are intended to foster creativity in order to get an idea of what such a program may entail. The first program is the CETA program offered by Kennedy Center, which was chosen because it is well-known, and the Aesthetic Education Institute of Colorado, which was chosen because it is well-known in the Denver metropolitan area.

The Kennedy Center's CETA program is the first endeavor. In the Washington, DC, area, the Kennedy Center has been establishing a network of partner schools since 1999 to provide teachers with access to professional learning opportunities. CETA's teaching technique is based on the notion that learning is actively created, experiential, growing, collaborative, problem-

solving, and reflective (CETA, 2010). Through the Kennedy Center, educators can enroll in workshops for professional development as well as courses that support the arts and creativity. In addition to the Kennedy Center, the Aesthetic Education Institute of Colorado (also known as 360 Think Arts for Learning) is another initiative that supports educators in fostering creativity. Think 360 is a 50-year-old nonprofit organization established in Denver, Colorado, that supports arts education programs by giving teachers access to professional development opportunities. Through its initiatives, such as the Institute for Creative Teaching and Creative Learning Labs, Think 360 promotes methods for creating and sustaining learning environments that foster creativity, innovation, student involvement, and 21st century skills (Think 360, 2018). Dr. Bruce Uhrmacher's CRISPA concept is made available via the Institute for Creative Teaching in collaboration with the University of Denver. One objective of the Think 360 institute, as mentioned in Chapter 1, is to identify and communicate to educators the salient features of aesthetic educational experiences so that educators can intentionally incorporate these features into their curricula, giving teachers and students opportunities for creative expression (Moroye & Uhrmacher, 2010). The six themes that comprise CRISPA are perceptivity, imagination, risk-taking, connections, and active involvement. The six themes of CRISPA include relationships, risk-taking, perception, sensory experiences, and active involvement, according to Moroye and Uhrmacher (2010). By participating in CRISPA in an exceptional way, students can gain advantages. Although this evaluation focuses on two projects that seek to encourage creativity in educators, there appears to be a lack of professional development for teachers in general, both pre-service and experienced. According to Newton and Newton's (2014) research, there is a need to address the issue of delivering appropriate training. Moreover, Makel (2009) explained that while the importance of creativity in education is generally understood, most college and university curricula still do not include it as a prerequisite for teacher preparation. Moreover, only a tiny portion of American colleges and universities had been able to offer courses on creative education, according to McDonough and McDonough's (1987) hypothesis. That being said, it's also important to acknowledge that some standards—such as the Colorado State Gifted Education Specialist Endorsement Standards—incorporate creative components. According to the Colorado Department of Education, these criteria are 9.05 (2) (a) (2) Past and proven recorded present theories associated to creativity and the expression of skill, as well as 9.05 (2) (c) (i) Different forms of giftedness and aptitude, including creativity. Seeing such expectations makes it clear that many educational domains appreciate creativity.

ANY INSTITUTION THAT WANTS TO SURVIVE NEEDS TO BE CREATIVE

According to Stanley, Slater, and Tomas (2008), both internal and external factors can have an impact on an individual's capacity for innovation and personal growth. According to Khasseh (2015), enhancing the association's viability and execution is one of the main goals of any creative endeavor. When organizational innovation rises, this can be accomplished. Despite being a fundamental aspect of human nature, creativity is commonly misunderstood in everyday speech (Moran, 2010). In our society, the phrase is used to describe artistic endeavors like paintings or plays, but it is also associated with personal expression, clothing codes, and

occasionally defiance of social norms (Moran, 2010). Psychologists generally agree that, as theories of creativity develop, creativity is characterized as a creative yet suitable reaction to a circumstance or problem (e.g. Runco, 2007). Runco's (2007) expanded definition is more precise for the purposes of this study. Psychologists generally agree that, as theories of creativity develop, creativity is characterized as a creative yet suitable reaction to a circumstance or problem (e.g. Runco, 2007). Runco's (2007) expanded definition is more precise for the purposes of this study. According to him, creativity is a characteristic that is specific to humans and shows our capacity to change with the times as well as our efficient cognitive capacities to synthesize and enhance new ideas that we are exposed to (Runco, 2007).

CREATIVITY AND EDUCATION

The concept of creativity and its function in education has gained popularity worldwide, but developed and industrialized countries are especially interested in researching it since innovation and technology are essential to long-term success (Aud, McCammon, & O'Farrell, 2007). Teachers, parents, companies, and politicians recognize that innovation will be necessary to address today's problems, including those related to health care, education, the environment, and the economy. Creativity is one of the key factors driving civilization forward (Hennessey & Amabile, 2010). Several academics have carried out in-depth examinations of how creativity functions in both society and education, and they have made cases for the importance of taking steps to foster creativity. Others have examined the significance of teachers' favorable attitudes toward creativity and the impact of standardized testing on their ability to support students' critical and creative thinking. We need creative and imaginative people to improve our communities and student achievement. Even if creative potential and products meet an economic and industrial demand, they permit and stimulate cross-fertilization among ideas and subject areas, all of which promote self-initiated learning (Moran, 2010). This interactive, social approach encourages students to tackle problems in real-world, experienced ways by utilizing their innate capacity to come up with fresh ideas from experiences. This supports how we naturally interact with the world and use common sense to solve difficulties. It is based on situated cognition theories. Educators that encourage creativity in the classroom have been shown in numerous studies to improve student engagement, memory, reasoning, and problem-solving abilities, all of which are important for improved learning and personal development (academic and nonacademic) (Karpov, Marcketti & Barker, 2011). These advantages have been attributed to the increased number of cognitive connections and associative networks established when different ideas and experiences are merged in environments that foster creativity. Researchers Karnes et al. found in 1961 that academic achievement and creativity were significantly correlated, with overachievers showing quantifiably higher levels of creativity than underachievers. Although their work had methodological flaws, it sparked a number of subsequent researches that looked into how to foster creativity and what kinds of learning settings support the development of students' academic and creative abilities. Building on the work of Karnes et al. (1961), Guilford (1967) and Torrance (1963) discovered that creative thinking abilities may be identified and fostered by direct training. Teachers that use inquiry-

discovery or problem-solving techniques as direct approaches to promote creativity intentionally give students opportunities to generate new ideas through practical experiences and develop complementary skills such as fluency, flexibility, elaboration, and originality (Fasco, 2001). These teaching techniques include students in problem-solving activities and allow them the opportunity to come up with solutions on their own through research, useful trial-and-error assignments, and supportive teacher feedback. Creative inquiry strategies give students the ability to take ownership of a problem and learn from their mistakes that they can correct on their own in contrast to direct instruction. The cognitive connections formed by authentic learning scenarios foster divergent thought processes and enable the development of novel and distinctive problem-solving strategies. The Osborn-Parnes Creative Problem-solving Program (Parnes, 2000) is a prime example of divergent thinking. The curriculum helps students explore problems, generate new ideas, and get ready to act which includes determining possible solutions by helping them identify facts and situations. The children of program participants demonstrated sustained higher levels of creativity along with enhanced research, reading, and language skills (Isaksen & Treffinger, 2004).

RESEARCH DESIGN

The survey method and descriptive study design were employed for data collecting. Descriptive research design was used and survey method adopted for collection of data. It means to describe the problem under research in current situation. Descriptive research aims to describe a scenario, phenomenon, or condition of events as it is at the moment. Data were gathered using a survey method and a descriptive study methodology. In descriptive research, characteristic of a particular event is identified through observational data, or correlations between two or more phenomenon are investigated (Creswell, 2002). One kind of research methodology called descriptive research seeks to identify and characterize the traits, actions and attributes of a particular phenomenon, group, or subject, without manipulating or alerting them. It focuses on providing an accurate and detailed account of the topic under investigation, often through the use of surveys, observations, content analysis, and other data collection methods. This research method is primarily concerned with answering what questions and is not focused on explaining or predicting phenomena. According to Neuman (2014) descriptive research aims to provide a detailed, accurate portrayal of situation or phenomenon. It is particularly valuable when researchers want to gain a better understanding of particular subject or when they need to establish a baseline for future research or analysis. Descriptive research can be a useful step in the research process, providing valuable data for subsequent exploratory or explanatory studies. The study used a descriptive survey approach to determine how teachers' creativity affected university students' academic achievement. The design was chosen because it made it easier for the researcher to get data from the participants. It focuses on providing an accurate and detailed account of the topic under investigation, often through the use of surveys, observations, content analysis, and other data collection methods.

RESEARCH APPROACH

The study used a quantitative method of inquiry, primarily utilizing numerical data to analyze and draw conclusions about the relationship between universities teachers' creativity and students' academic performance. This approach is chosen for its ability to provide statistical evidence and measure the strength and direction of the relationship.

POPULATION

The total group about which a researcher wishes to make conclusions is referred to as the population. Population for the study is displayed in the table below. According to Mitchell (2012), the population is the intended audience for the study.

SAMPLE OF STUDY

A sample is a specific group that we collect data from. In research, sampling is the process of choosing a subset of units to reflect the target population.

-
- | | |
|-----|--|
| 1. | I suggest new ways to achieve goals or objectives |
| 2. | I come up in class with new and practical ideas to improve performance |
| 3. | I search out new technologies, processes, techniques, and ideas |
| 4. | I suggest new ways to increase quality |
| 5. | I am good source of creative ideas |
| 6. | I am not afraid to take risks |
| 7. | I promote and champions ideas to others |
| 8. | I exhibit creativity on the job when given the opportunity to |
| 9. | I develop adequate plans and schedules for the implementation of new ideas |
| 10. | I often have new and innovative ideas |
| 11. | I come up with creative solutions to problems |
| 12. | I often have fresh approach to problems |
| 13. | I suggest new ways of performing work tasks |
-

The mean value of statements 1 to 13 is from 3.58 to 4.39 with SD =.71 to 1.23. It means all the teachers have characteristics.

My teacher suggests new ways to achieve goals or objectives
 My teacher comes up with new and practical ideas to improve performance
 My teacher searches out new technologies, processes, techniques, and ideas
 My Teacher suggest new ways to increase quality
 My teacher is a good source of creative ideas
 My teacher is not afraid to take risks
 My teacher promotes and champions ideas to others
 My Teacher Exhibits creativity on the job when given the opportunity to
 My teacher develops adequate plans and schedules for the implementation of new ideas
 My Teacher often has new and innovative ideas
 My Teacher comes up with creative solutions to problems
 My Teacher often has a fresh approach to problems

My Teacher suggests new ways of performing work tasks.

The mean value of statements from 3.78 to 4.36 with SD.86 to 1.23. According to students, their teachers have characteristics. All teachers are creative.

DISCUSSION

Any institution that wants to survive needs to be creative. According to Stanley, Slater, and Tomas (2008), both internal and external factors can have an impact on an individual's innovativeness and personal growth. According to Brunvand, Soheili, and Khasseh (2015), enhancing the association's viability and execution is one of the main goals of any creative endeavor. When organizational innovation rises, this can be accomplished. This outcome is comparable to the current study's outcome. Psychologists have come to the consensus as theories of creativity change that creativity is best described as an original but suitable reaction to a circumstance or challenge (Moran & John-Steiner, 2003; Runco, 2007; Sternberg 1999). My result and this result are comparable.

More accuracy can be obtained with Runco's (2007) expanded definition. According to him, creativity is a characteristic that is specific to humans and shows our capacity to change with the times and our efficient use of reason to synthesize and enhance new ideas. My result and this result are comparable. By characterizing creativity as the process of coming up with new ideas, one can distinguish it from innovation, which is the applied result or the act of executing novel ideas (West & Rickards, 1999). , it is evident that people will need to be ready to successfully handle complicated and ill-defined problems in a changing environment as technology advances, societal norms change, and the global economy moves (Beghetto, 2010, Moran, 2010; Wells & Claxton, 2002). This result is similar with my result.

According to Moroye and Uhrmacher, CRISPA consists of six themes: Active engagement, sensory experiences, imagination, connections, risk-taking, and perceptivity. According to Moroye and Uhrmacher (2010), students can have remarkable learning experiences with CRISPA. Students get the chance to engage in aesthetically pleasing encounters thanks to this amazing experience, which fosters creativity. My result and this result are comparable.

Bishop (2013) defines creativity as the process of creating a new product that is both original and suitable for a given situation. (An idea, a piece of art, an innovation, or a task for your class could all be considered products.) There is no one right method to "be creative," nor is there a single combination of traits that define "the" creative individual. Rather, a lot of experts consider creativity to be a collection of abilities and mindsets that anybody can possess: accepting ambiguity, rethinking old issues, coming up with new issues to address, taking calculated risks, and pursuing a personal passion. My result and this result are comparable.

FINDINGS

1.The independent variable, objective achievement, causes a 9.4% change in the dependent variable (GPA), according to the R square value of.094. Since the p value is.002, which is less than the.05 threshold, we can conclude that the independent and dependent variables have a significant relationship. According to the coefficient finding, the beta value is.306, meaning that a one unit change in the independent variables will result in a.306 unit change in the dependent

variables. Additionally, the beta value is positive, indicating a positive correlation between goal achievement and CGPA. Put another way, this means that for every unit rise in goal success, academic performance will likewise increase by.306 units. Academic performance is significantly impacted by teachers' goal- achievement.

2. The dependent variable (CGPA) changes by 2.8% when our independent variable, or practical ideas, has a R square value of .285. Since the P value is .000, which is smaller than the .05 value, we can conclude that the independent and dependent variables have a significant relationship. According to the coefficient finding, the beta value is .534, meaning that a one unit change in the independent variables will result in a .534 unit change in the dependent variables. Academic achievement is significantly impacted by teachers' practical ideas strategies.

3. The dependent variable (CGPA) changes by 2.6% as a result of our independent variable, new technology, according to the R square value of .265. Since the P value is .000, which is smaller than the .05 value, we can conclude that the independent and dependent variables have a significant relationship. According to the coefficient finding, the beta value is .514, meaning that a one unit change in the independent variables will result in a .514 unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between the new technology and CGPA. Put another way, this means that for every unit increase in the new technology, academic performance will rise by .514 units. The new technology strategies that educators employ have a big impact on students' academic performance.

4. The dependent variable (CGPA) changes by 2.8% when our independent variable (quality improvement) has a R square value of .281. Since the p value is .000, which is less than the .05 value, we can conclude that the independent and dependent variables have a significant relationship. According to the coefficient finding, the beta value is .530, meaning that a one unit change in the independent variables will result in a .530 unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between the CGPA and quality improvement. Put another way, this means that for every unit gain in quality, academic performance will rise by .530 units. Academic attainment is significantly impacted by teachers' employment of higher-quality teaching strategies.

5. The dependent variable (CGPA) changes 1.8% as a result of our independent variable, innovative thoughts, which have a R square value of .182. Since the P value is .000, which is smaller than the .05 value, we can conclude that the independent and dependent variables have a significant relationship. According to the coefficient finding, the beta value is .426; this suggests that a one unit change in the independent variables will result in a .426 unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between creative ideas and CGPA. Put another way, this means that for every unit increase in creative ideas, academic performance will rise by .426 units. Academic attainment is significantly impacted by instructors' innovative ideas and strategies.

6. The dependent variable (CGPA) changes by 3.3% as a result of our independent variable, risk management, with a R square value of .334. Since the P value is .000, which is smaller than the .05 value, we can conclude that the independent and dependent variables have a significant

relationship. According to the coefficient finding, the beta value is.578; this suggests that a one unit change in the independent variables will result in a.578 unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between risk management and CGPA. Put another way, this means that for every unit improvement in risk management, academic performance will raise by.578 units Academic attainment is significantly impacted by instructors' usage of the Risk Management method.

7. The R square value is.185, indicating that the promotion of ideas, our independent variable, results in a 1.8% change in the dependent variable (CGPA). Since the P value is.000, which is smaller than the.05 value, we can conclude that the independent and dependent variables have a significant relationship. According to the coefficient finding, the beta value is.431, meaning that a one unit change in the independent variables will result in a.431 unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between the promote ideas and CGPA. Put another way, this means that for every unit increase in the promote ideas, academic performance will increase by.431 units. Teachers' strategies to promote concepts have a big impact on students' academic. The way professor's present ideas have a big impact on students' academic performance.

8. The R square value is.226; this indicates that the job creativity independent variable causes a 2.2% change in the dependent variable (CGPA). Since the P value is smaller than.05 (i.e.,.000), we can conclude that there is a significant relationship between the independent and dependent variables. According to coefficient finding, the beta value is.475, meaning that a one-unit change in the independent variables will result in a.475-unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between job creativity and CGPA. Put another way, this means that for every unit increase in job creativity, academic performance will raise by.475 units Teachers' job creative strategies have a big impact on students' academic performance.

9. The dependent variable (CGPA) changes by 1.1% when new ideas are implemented, according to the R square value of.115. The ANOVA findings indicate p-value of.001, which is less than the significance level of.05, indicating a significant relationship between the independent and dependent variables. According to coefficient results, the beta value is.339, meaning that a one unit change in the independent variables will result in a.339 unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between the application of ideas and CGPA. Put another way, this means that for every unit that ideas are implemented academic performance will increase .339 units. Academic attainment is significantly impacted by instructors' adoption of innovative ideas and strategies.

10. The dependent variable (CGPA) changes by 2.1% when the independent variable (innovative ideas) has a R square value of.219. Since the p value in the ANOVA findings is less than.05 (i.e.,.000), we can conclude that there is a significant relationship between the independent and dependent variables. According to coefficient results, the beta value is.468; this suggests that a one unit change in the independent variables will result in a.468 unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between the

creative ideas and CGPA. Put another way, this means that for every unit increase in creative ideas, academic performance will increase by .339 units. The implementation of new ideas strategy used by teachers has significant effect on academic achievement.

11. The dependent variable (CGPA) changes by 2.8% when the independent variable (creative solution) has a R square value of .282. Since the p value in the ANOVA findings is less than .05 (i.e. .000), we can conclude that there is a significant relationship between the independent and dependent variables. Coefficient results show that the beta value is .531, meaning that a one unit change in the independent variables will result in a .531 unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between the creative solution and CGPA. Put another way, this means that for every unit increase in the creative solution, academic performance will rise by .531 units. Academic attainment is greatly impacted by instructors' innovative problem-solving techniques.

12. The fresh approach independent variable, with an R square value of .245, results in a 2.4% change in the dependent variable (CGPA). Since the p value in the ANOVA findings is less than .05 (i.e., .000), we can conclude that there is a significant relationship between the independent and dependent variables. According to coefficient values, the beta value is .495, meaning that a one-unit change in the independent variables will result in a .495-unit change in the dependent variables. Additionally, the beta value is positive, indicating a positive correlation between the new technique and CGPA. Put another way, this means that for every unit increase in the new strategy, academic performance will also increase 4.495 units. The innovative methods that educators employ have a big impact on students' academic performance.

13. The R square value is .184, indicating that the independent variable new method suggestions cause a 1.8% change in the dependent variable (CGPA). Since the p value in the ANOVA findings is .000, which is less than the .05 value, we can conclude that there is a significant relationship between the independent and dependent variables. According to coefficient results, the beta value is .429, meaning that a one unit change in the independent variables will result in a .429 unit change in the dependent variables. Additionally, the beta value is positive, suggesting a positive correlation between the CGPA and the recommendation of new ways. Put another way, this means that as the suggestion of new approaches goals increases by one unit, additionally, the academic performance will rise by .429 units. Academic attainment is significantly impacted by teachers' innovative concept suggestions and strategies.

CONCLUSION

An overview of the key findings from this investigation is given in this section. First, the impact of a teacher's creativity on students' accomplishment is examined, followed by observations regarding the relationships demonstrated throughout this analysis with regard to demographic characteristics. Based on the previously described study findings, the following inferences can be made. The academic achievement of university students is significantly enhanced by creativity. Through ongoing feedback, observation, and change, creativity enables teachers to identify students' strengths and weaknesses and provide tailored education. This customized approach promotes metacognition, self-reflection, and increased student

engagement. Additionally, it improves subject comprehension. As a result, students in Districts Bagh and Kotli experience improved learning outcomes, more motivation to succeed, and improved retention.

RECOMMENDATIONS

To accomplish the study's goals, the researcher offered the following suggestions in light of the study's findings:

1. The Ministry of Education, in conjunction with the government, ought to arrange a workshop program for all instructors, educating them on the significance of creativity in these children's academic achievement.

1. To improve students' academic performance, university administration should provide in-service training on creative talent development to all teachers.

2. Government and non-governmental groups should plan programs to raise teacher and student awareness and educate them about the importance of creativity in the classroom and how it affects students' academic achievement.

REFERENCES

- Adeel, A., & Pengcheng, Z. (2016). Gender similarity and individual creativity as moderators of the relationship between informal leadership and leader-member exchange: A longitudinal study. *European Journal of Business and Management*, 8 (2), 90-102.
- Amadi, U., Winkler, A.M., Wilkins, L., Filippini, N., Kischka, U., Stagg, C.J., & Johansen-Berg, H. (2016). Ipsilesional anodal tDCS enhances the functional benefits of rehabilitation in patients after stroke. *Science Translational Medicine*, 8, 330re1 - 330re1.
- Annie Gruber, Clergerie, J., Clergerie, J., Gruber, A., Rambaud, P., Gruber, A., & Rambaud, P. (2016). L'Union européenne (11e éd., 2016) Jean-Louis Clergerie, Patrick Rambaud,.
- Anyanwu, J. C., & Erhijakpor, A. E. (2010). Do international remittances affect poverty in Africa?. *African Development Review*, 22(1), 51-91.
- Anyanwu, S., Aiyedogbon, J. O., & Ohwofasa, B. O. (2015). Foreign Direct Investment in Real Sector and Economic Growth in Nigeria, 1986–2011: A Parsimonious Error Correction Model. *Journal of Economics and Sustainable Development* 6 (5), 124-133.
- Atabek, O., & Burak, S. (2020). Pre-School and Primary School Pre-Service Teachers' Attitudes towards Using Technology in Music Education. *Eurasian Journal of Educational Research*.
- Baer, T., & Moore, B. C. (1993). Effects of spectral smearing on the intelligibility of sentences in noise. *The Journal of the Acoustical Society of America*, 94(3), 1229-1241.
- Barker, S., Knorr, G., Edwards, R. L., Parrenin, F., Putnam, A. E., Skinner, L. C., ... & Ziegler, M. (2011). 800,000 years of abrupt climate variability. *science*, 334(6054), 347-351.
- Bautista, M., Sosa-Soto, G., Navarrete, K. M., ... & Dantas, G. (2016). Interconnected microbiomes and resistomes in low-income human habitats. *Nature*, 533(7602), 212-216.
- Beghetto, R. A. (2010). Creativity in the classroom. *The Cambridge handbook of creativity*, 447-463.
- Berki, E. (2011). Fostering creative thinking-what do primary teachers recommend?. *Hellenic journal of music, education and culture*, 2(1).

- Berki, E., &Saariluoma, P. (2009). Kampylis, P., In-service and prospective teachers' conceptions of creativity. *Thinking skills and creativity*, 4(1), 15-29.
- Brandt, M. W., Brav, A., Graham, J. R., & Kumar, A. (2010). The idiosyncratic volatility puzzle: Time trend or speculative episodes?. *The Review of Financial Studies*, 23(2), 863-899.
- Cassandro, V. J., & Simonton, D. K. (2003). Creativity and genius.
- CENTER, K. S. (2017). Microbiological/Horticultural Internship Final Abstract.
- Cho, S., Irianto, J., & Discher, D. E. (2017). Mechanosensing by the nucleus: From pathways to scaling relationships. *Journal of Cell Biology*, 216(2), 305-315.
- Cloninger, C. R. (2004). *Feeling good: the science of well-being*. Oxford University Press.
- Colley, R. C., Carson, V., Garriguet, D., Janssen, I., Roberts, K. C., & Tremblay, M. S. (2017). Physical activity of Canadian children and youth, 2007 to 2015.
- Creswell, J. W., Clark, V. L. P., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed. *Handbook of mixed methods in social & behavioral research*, 209..
- Cropley, A., & Cropley, D. (2008). Resolving the paradoxes of creativity: An extended phase model. *Cambridge Journal of Education*, 38(3), 355-373.
- Csikszentmihalyi, M., &Csikszentmihaly, M. (1990). *Flow: The psychology of optimal experience* (Vol. 1990, p. 1). New York: Harper & Row.
- Dewey, D. D. S., M. D. Neustadt, E. (1933). Doctor Martin 1881–1933. *Fortschritte der Orthodontik in Theorie und Praxis*, 3, 236.
- ElMelegy, A.R., Mohiuddin, Q., Boronico, J.S., &Maasher, A. (2016). Fostering Creativity in Creative Environments: An Empirical Study of Saudi Architectural Firms. *Contemporary Management Research*, 12, 89-120.
- Estes, Z., & Ward, T. B. (2002). The emergence of novel attributes in concept modification. *Creativity Research Journal*, 14(2), 149-156.
- Fasco, M., Bessette, E., Zhang, Q. Y., & Kaminsky, L. S. (2001). Polycyclic aromatic hydrocarbon/metal mixtures: effect on PAH induction of CYP1A1 in human HEPG2 cells. *Drug Metabolism and Disposition*, 29(7), 999-1006.
- Gardner, W. A. (1984). Learning characteristics of stochastic-gradient-descent algorithms: A general study, analysis, and critique. *Signal processing*, 6(2), 113-133.
- Getzels, J. W. (1987). Creativity, intelligence, and problem finding: Retrospect and prospect. *Frontiers of creativity research*, 88-102.
- Goldsmith, R.W. (1986). Comparative national balance sheets : a study of twenty countries, 1688-1978. *Southern Economic Journal*, 53, 289.
- Gruber, R.P., Kahn, R.A., Lash, H., Maser, M.R., Apfelberg, D.B., & Laub, D.R. (1981). Breast Reconstruction Following Mastectomy: A Comparison of Submuscular and Subcutaneous Techniques. *Plastic and Reconstructive Surgery*, 67, 312–317.
- Guilford, J. P. (1967). Creativity: Yesterday, today and tomorrow. *The Journal of Creative Behavior*, 1(1), 3-14.
- Haberle, V., & Stark, A. (2018). Eukaryotic core promoters and the functional basis of transcription initiation. *Nature reviews Molecular cell biology*, 19(10), 621-637.

- Hennessey, B. A. (2010). The creativity-motivation connection. *The Cambridge handbook of creativity*, 2010, 342-365.
- Henriksen, D., & Mishra, P. (2015). We teach who we are: Creativity in the lives and practices of accomplished teachers. *Teachers College Record*, 117(7), 1-46.
- Hosseini, A. S., & Watt, A. P. (2010). The effect of a teacher professional development in facilitating students' creativity. *Educational Research and Reviews*, 5(8), 432.
- Ilako, C., & Ikoja-Odongo, R. (2011). Creativity and innovations in Ugandan libraries: case of Makerere University Library.
- Jantz, M.A., Margolis, M.L., Gould, M.K., Tanoue, L.T., Harris, L.J., & Detterbeck, F.C. (2013). Methods for staging non-small cell lung cancer: Diagnosis and management of lung cancer, 3rd ed: American College of Chest Physicians evidence-based clinical practice guidelines. *Chest*, 143 5 Suppl, e211S-e250S .
- Karnes, M. B., McCoy, G. F., Zehrbach, R. R., Wollersheim, J. P., Clarizio, H. F., Costin, L., & Stanley, L. S. (1961). Factors associated with underachievement and overachievement of intellectually gifted children. *Exceptional Children*, 28(4), 167-175.
- Khasseh, A. A. (2015). Knowledge sharing among librarians in public libraries of Fars Province, Iran. *Library Philosophy and Practice*, 1, 1259.
- Kozbelt, A., Beghetto, R. A., & Runco, M. A. (2010). Theories of creativity. *The Cambridge handbook of creativity*, 2, 20-47.
- Lombardi, M. M., & Oblinger, D. G. (2007). Authentic learning for the 21st century: An overview. *Educause learning initiative*, 1(2007), 1-12.
- Makel, M. C. (2009). Help us creativity researchers, you're our only hope. *Psychology of Aesthetics, Creativity, and the Arts*, 3(1), 38.
- Manley, K., & Lucas, M. (2021). Limits and opportunities for miniaturizing ultrasonic surgical devices based on a Langevin transducer. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, 68(7), 2543-2553.
- Marcketti, S. B., & Barker, J. (2011). The efficacy of teaching creativity: Assessment of student creative thinking before and after exercises. *Clothing and Textiles Research Journal*, 29(1), 52-66.
- Mason, J. (1996). Expressing generality and roots of algebra. In *Approaches to algebra: Perspectives for research and teaching* (pp. 65-86). Dordrecht: Springer Netherlands.
- McCammon, L. A., & O'Farrell, L. (2007). Creative teaching—teaching creativity. *Caribbean quarterly*, 53(1-2), 205-215.
- Mengert, B. (2010). Employer Liability for Sexual Harassment under Title VII.
- Millar, C., Hind, P., & Magala, S. (2012). Sustainability and the need for change: organisational change and transformational vision. *Journal of Organizational Change Management*, 25(4), 489-500.
- Mitchell, W. K., Williams, J., Atherton, P., Larvin, M., Lund, J., & Narici, M. (2012). Sarcopenia, dynapenia, and the impact of advancing age on human skeletal muscle size and strength; a quantitative review. *Frontiers in physiology*, 3, 260.

- Moran, R. T., Harris, P. R., & Moran, S. (2010). *Managing cultural differences*. Routledge.
- Moroye, C. M., & Uhrmacher, P. B. (2010). Aesthetic themes as conduits to creativity. *Cultivating curious and creative minds: The role of teachers and teacher educators*. Lanham, Maryland: Rowman & Littlefield Education, 99-114.
- Muller, A. E., Skurtveit, S., & Clausen, T. (2016). Many correlates of poor quality of life among substance users entering treatment are not addiction-specific. *Health and quality of life outcomes*, 14, 1-10.
- Mullet, D. R., Willerson, A., Lamb, K. N., & Kettler, T. (2016). Examining teacher perceptions of creativity: A systematic review of the literature. *Thinking Skills and Creativity*, 21, 9-30.
- Neuman, D. (2014). Qualitative research in educational communications and technology: A brief introduction to principles and procedures. *Journal of Computing in Higher Education*, 26, 69-86.
- Newton, P. E. (2010). Contrasting conceptions of comparability. *Research Papers in Education*, 25(3), 285-292.
- Nwankwo, C.D., Dutton, P.H., Merriman, J.A., Gajudo, G., Gill, K., & Hatch, J. (2018). Outpatient Total Shoulder Arthroplasty Does Not Increase the 90-Day Risk of Complications Compared With Inpatient Surgery in Prescreened Patients. *Orthopedics*, 41 4, e563-e568 .
- Olivant, K. F. (2015). "I am not a format": Teachers' experiences with fostering creativity in the era of accountability. *Journal of Research in Childhood Education*, 29(1), 115-129.
- Osborn, J. J. (1953). Experimental hypothermia: respiratory and blood pH changes in relation to cardiac function. *American Journal of Physiology-Legacy Content*, 175(3), 389-398.
- Parnes, J. R., & Pan, C. H. I. N. (2000). CD72, a negative regulator of B-cell responsiveness. *Immunological reviews*, 176, 75-85.
- Parnes, S. M., & Chuma, A. V. (2000). Acute effects of antileukotrienes on sinonasal polyposis and sinusitis. *Ear, nose & throat journal*, 79(1), 18-25.
- Piirto, D.D., & Caramagno, D. (2004). Fire Regimes and Resultant Forest Structure in the Native Año Nuevo Monterey Pine (*Pinus radiata*) Forest, California.
- Reid, E. (2015). Embracing, passing, revealing, and the ideal worker image: How people navigate expected and experienced professional identities. *Organization science*, 26(4), 997-1017.
- Reis, S. M., & Renzulli, J. S. (2003). Research related to the schoolwide enrichment triad model. *Gifted Education International*, 18(1), 15-39.
- Renzulli, L., & Curry, B. (2017). Unequal City: Race, Schools, and Perceptions of Injustice. *Contemporary Sociology: A Journal of Reviews*, 46, 599 - 601.
- Runco, M. A. (2007). A hierarchical framework for the study of creativity. *New Horizons in Education*, 55(3), 1-9.
- Runco, M. A. (2010). Divergent thinking, creativity, and ideation. *The Cambridge handbook of creativity*, 413, 446.
- Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of management review*, 18(2), 293-321.

- Schlichter, L. C., Sakellaropoulos, G., Ballyk, B., Pennefather, P. S., & Phipps, D. J. (1996). Properties of K⁺ and Cl⁻ channels and their involvement in proliferation of rat microglial cells. *Glia*, 17(3), 225-236.
- Slater, A. G., Tomas, R. A., Holland, M. M., & Deser, C. (2008). Accelerated Arctic land warming and permafrost degradation during rapid sea ice loss. *Geophysical Research Letters*, 35(11).
- Soh, C., Kien, S. S., & Tay-Yap, J. (2000). Enterprise resource planning: cultural fits and misfits: is ERP a universal solution?. *Communications of the ACM*, 43(4), 47-51.
- Soheili, H. (2015). The relationship between the efficiency of working capital management companies and corporate rule in Tehran stock exchange. *Procedia-Social and Behavioral Sciences*, 205, 499-504.
- Starko, S., Boo, G.H., Martone, P.T., & Lindstrom, S.C. (2018). A molecular investigation of *Saccharina sessilis* from the Aleutian Islands reveals a species complex, necessitating the new combination *Saccharina subsessilis*. *ALGAE*.
- Sternberg, C.N., Davis, I.D., Mardiak, J., Szczylik, C., Lee, E., Wagstaff, J., Barrios, C.H., Salman, P., Gladkov, O.A., Kavina, A., Zarbá, J.J., Chen, M., McCann, L., Pandite, L.N., Roychowdhury, D., & Hawkins, R.E. (2010).
- Sternberg, R. (2007). The Changing Face of Entrepreneurship in Germany. *Small Business Economics*, 28, 205-221.
- Stoian, C.R., & Mohr, A. (2016). Outward foreign direct investment from emerging economies: escaping home country regulative voids. *International Business Review*, 25, 1124-1135.
- Think entrepreneur - think male Laguía, A., García-Ael, C., Wach, D., & Moriano, J.A. (2018).: a task and relationship scale to measure gender stereotypes in entrepreneurship. *International Entrepreneurship and Management Journal*, 1-24.
- Thomas, G. (2000). Ideals, perceptions, and evaluations in early relationship development. *Journal of personality and social psychology*, 79(6), 933.
- Van de Vijver, S., Akinyi, H., Oti, S.O., Olajide, A.T., Agyemang, C., Aboderin, I., & Kyobutungi, C. (2013). Status report on hypertension in Africa - Consultative review for the 6th Session of the African Union Conference of Ministers of Health on NCD's. *The Pan African Medical Journal*, 16.
- Zhou, J., & George, J.M. (2001). When Job Dissatisfaction Leads to Creativity: Encouraging the Expression of Voice. *Academy of Management Journal*, 44, 682-696.