ARTÍCULOS DE REVISIÓN
Review Articles

Theoretical approach to the notion of creativity: a systematic review

Aproximación teórica al concepto de creatividad: una revisión sistemática

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Recibido: 21 de junio de 2021–**Aceptado:** 09 de agosto de 2022–**Publicado:** 04 de julio de 2023

Forma de citar este artículo en APA:
González Moreno, A., & Molero Jurado, M. M. (2023). Theorical approach the notion of creativity: a systematic review. *Revista Colombiana de Ciencias Sociales. 14*(2), 631-650. https://doi.org/10.21501/22161201.4015

Abstract

Introduction: The concept of creativity is a term that has been studied to find an exact definition of it. The study aims is to analyze the various existing definitions of creativity to find a diversity of meanings of the same term. **Methodology:** The methodology used is based on a systematic review of the literature based on the principles of the PRISMA statement and which refers to the search for research in the Dialnet Plus, Scielo and Scopus databases. **Results:** The results found show the diversity of existing definitions of creativity and how these can be classified depending on their meaning into person, process, product or environment; focusing therefore these studies on understanding creativity as a mental process that is used for the resolution of a conflict from something original and novel. **Conclusions:** In short, as a conclusion, it

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DOI: https://doi.org/10.21501/22161201.4015

is necessary to point out how the construct of creativity can be understood in different ways depending on the perspective in which it is studied, which leads to the fact that there is no generalized term for creativity and that it is so ambiguous.

Keywords

Creativity; Conceptualization; Linguistic diversity; Investigation.

Resumen

Introducción: El concepto de creatividad es un término que ha sido estudiado para poder hallar una definición exacta del mismo. El objetivo de este estudio es analizar los diversos conceptos existentes sobre creatividad con la finalidad de diversidad de significados acerca de un mismo término. **Metodología:** La metodología empleada se encuentra basada en una revisión sistemática de la literatura fundamentada en los principios de la declaración PRISMA y que hace referencia a la búsqueda de investigaciones en las bases de datos de Dialnet Plus, Scielo y Scopus. **Resultados:** Los resultados encontrados muestran la diversidad de conceptos existentes sobre creatividad y cómo estos pueden clasificarse dependiendo de su significado en: persona, proceso, producto o ambiente; enfocándose pues estos estudios en entender la creatividad como un proceso mental que se utiliza para la resolución de un conflicto a partir de algo original y novedoso. **Conclusiones:** En definitiva, como conclusión, es preciso señalar cómo el constructo de la creatividad puede ser entendido de diferente manera dependiendo de la perspectiva en la que se estudie, lo que conlleva que no exista un término generalizado para la creatividad y que este sea tan ambiguo.

Palabras clave

Creatividad; Conceptualización; Diversidad lingüística; Investigación.

DOI: https://doi.org/10.21501/22161201.4015

Introduction

The concept of creativity is a broad term that has been evolving regarding accuracy and complexity (Corbalán, 2008). From an etymological point of view, the word "creativity" comes from the Latin terms *creatio* and *creare*, and Christianism understands it as the "divine production out of nothing" in connection to the creation of the universe (Villamizar, 2012).

There are many definitions for this concept since, as discussed by Garaigordobil (2003), there can be as many definitions as possible points of view, leading to a polysemic and multidimensional phenomenon. It is worth noting that although many authors study creativity, there is still no unanimous definition that encompasses all the characteristics about to this construct (Hammershøj, 2014). As stated by Cabrera-Cuevas (2018), there are more than four hundred definitions of creativity collected in the last decades, meaning the concept of creativity has multiple definitions.

One of the problems that may arise from dealing with the concept of creativity is that it can be focused from three different perspectives: as a feature of personality, as divergent thinking or as the creative production (Barron & Harrington, 1981). Referring to creativity in a coloquially way, it should be emphasized that this concept is understood as the search for solutions to a given problem based on the subject's previous ideas, thus creating something novel (Lara-Posada & Castro-Correa, 2017). This proposal is one of the most valued ones within the scientific community, given that creativity is understood as the ability people have to create original ideas and things while considering the social context in which these creations are intended to be developed (Muñoz, 2011). Therefore, creativity allows solving problems by employing original solutions that integrate existing knowledge with different perspectives (Chiecher et al., 2018). Moreover, as mentioned by Krumm et al. (2014), creativity is influenced by different social elements and educational and evolutional experiences, which is why this construct appears in different ways in different fields.

Several researchers agree that four elements should be considered within the conceptualization of creativity: the person as a creative being, the creative process, the situation or environment where it is produced, and the result or obtained product (Mooney, 1963; Brown, 1989). This categorization was created by Rhodes (1961) and is one of the most famous models in the world since, as this author indicates, creativity refers to the creation of a new product based on the cognitive thinking of an individual immersed in a specific environment. Concerning the studies focused on the creative person, research is centered on studying the personality traits of the creative subjects, such as self-esteem, independence, fluency, trust, motivation, flexibility, persistence, imagination, curiosity, and originality, among others (Plucker & Renzulli, 2009; Wechsler, 2008). On the other hand, the creative process is more linked to the sequence of phases or stages to

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be completed during the creation. Wallas (1926) is one of the first researchers to describe that the creative process is composed of the following sequence: (a) preparation, (b) incubation, (c) illumination, and (d) evaluation. In terms of the creative product, his diverse research focuses on assessing the characteristics of an object to know if that product is creative. It is emphasized that to define a product as creative, it must have the following characteristics: (a) novelty, (b) resolution, and (c) elaboration (O'Quin & Besemer, 1999; Puccio et al., 1995). Finally, the last component, the environment, refers to three elements: (a) the place where the creative individual is, (b) where the creative process takes place, (c) where the product is produced (Scritchfield, 1999). The last element is the most subjective, as it involves the relationship between the creative subject and their environment, as well as the set of social or cultural elements in the environment that may enhance or inhibit creativity (Isaksen, 1995; Soliman, 2005). This relationship between environment and creativity is also studied by Csíkszentmihályi (1988), who argues that creativity is not just a mental process but that it includes a social, cultural, and psychological element. Psychologist Mihály Csíkszentmihályi states that creativity comprises three elements: culture with its own symbolic rules, an individual providing something new, and a group of experts that validate the idea (1988).

It should be noted how the studies on creativity have focused not only on developing a comprehensive definition of creativity but also on examining other aspects (Morales-Valiente, 2017). Some of them aimed at presenting the diverse models of the creative process. Current creativity models refer to the interaction between processes, personality, products, and environment to explain how creativity emerges (Fernández & Peralta, 1998).

One of the noteworthy models is the Componential Model of Creativity designed by Urban (1990; 1995), who understands creativity as the result of the collaborative work of cognitive components (divergent thinking, general knowledge and thinking base, and specific knowledge) and personality components (task commitment, motivation and motives, and openness and tolerance of ambiguity) since the creative process cannot be explained if such components work individually.

There is also the Theoretical Model of Productive Thinking (Treffinger et al., 1990), where creativity is a vital element of this type of thinking. This model is structured in three levels. Level 1 establishes knowledge-related elements, level 2 includes the tools involved, and level 3 comprises decision-making and conflict resolution.

Another model is the one developed by Sternberg and Lubart (1993), where a parallelism is presented between creative people and investors. This idea comes from the fact that people who invest must have certain resources which make them creative, such resources are: intellectual processes, knowledge, intellectual styles, personality, motivation, and context.

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Referring to Goswami (2009), this researcher identifies two fundamental phases in creativity: incubation and inspiration. On the one hand, incubation refers to searching for solutions, while inspiration refers to creating ideas.

Something to be noted about creativity is that, from the beginning, it has been linked to specific spheres of artistic production, for example, musical improvisation or dancing (Berkowitz & Ansari, 2010; López-González & Limb, 2012; Fink et al., 2009). Additionally, most of the first studies on creativity were focused on studying it along with intelligence (Contreras & Romo, 1989). This idea is based on the fact that, as Pinillos (1975) points out, creativity demands certain mental operations typical of intelligence from the subject. Therefore, several studies have focused on assessing creativity through its connection to intelligence, such as Garaigordobil and Torres (1996), who state that creativity is significantly related to intelligence. The first author to establish significant differences between intelligence and creativity is Guilford (1956), who indicates that certain creative behaviors, such as divergent and convergent production, memory, knowledge, and evaluation, are also elements of intelligence. Thus, as noted by Wallach and Kohan (1965), it can be stated that intelligence and creativity are not the same, but a certain level of intelligence is necessary for a subject to have a good level of creativity since both constructs interact with each other. These authors elaborated a classification based on four groups according to the level of intelligence and creativity of individuals: a) Subjects with high creativity and intelligence are independent; b) Subjects with high creativity and low intelligence tend to be conflictive and seek the attention of others; c) Subjects with low creativity and high intelligence focus on obtaining good grades in the school context and do not seek attention; d) Subjects with low creativity and low intelligence have significant adaptation problems and do not act in the same way in the face of a given conflict. Following this classification, Guilford (1977) points out that there are not many people in the group of subjects with high creativity and low intelligence. This idea is completely contradictory to the group based on subjects with low creativity and high creativity, where it is more common to find a wide variety of people.

Currently, this concept is of importance in other disciplines, such as education (González & Molero, 2022). Barrera et al. (2011) claim that the development of creativity in students promotes human growth. Creativity is considered a teaching method that encourages students to learn about reality (de la Torre, 2003). Therefore, there is an increasing number of studies where the participants are immersed in the school environment and connect creativity to other variables such as academic performance (Elisondo et al., 2018; Caballero-García & Fernández-García, 2018; Lamana-Selva & de la Peña, 2018), motivation (Miranda & Morais, 2019; Vernia-Carrasco, 2015), and even other aspects such as self-esteem (Solano, de la Peña, & Gómez-Escobar, 2018). Moreover, regarding the impact of new technologies, these types of innovative resources are being used to promote creativity in stud|ents (González & Molero, 2021; Xerach-Pérez, 2014).

The main goal of this paper is to analyze the concept of creativity to know the diversity of definitions of the same term.

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Methodology

This research was developed with a methodology focused on a systematic review to meet the above-mentioned objective (Sánchez-Meca, 2010). The principles established by the PRISMA statement for improving and correctly developing systematic review works (Urrútia & Bonfil, 2010) have been followed. Additionally, a series of phases have been carried out to ensure the quality of works of such characteristics; these phases were: establishing the subject to be treated, establishing the objective to be achieved, indicating the databases and search strategies used, elaborating a flow chart with the process followed in selecting the articles, analyzing the results found (Alexander, 2020; de la Serna-Tuya et al., 2018; Ramírez et al., 2018).

Procedure and databases

This systematic review was completed based on searching information in different databases specialized in the subject, such as Dialnet Plus, Scielo, Scopus, and the search engine Google Scholar as a complement to support the search for additional information.

Table 1.

Databases, keywords, search formulas, filters and results

Databases	Keywords	Search formulas	Filters	No. of articles found after filtering
Dialnet Plus	concept and creativity	concepto AND creatividad	Journal article Language in Spanish or English Full-text availability Psychology subject	350
SciELO	concept and creativity	concepto AND creatividad	Journal article Language in Spanish or English Full-text availability Psychology subject	39
Scopus	concept and creativity	concepto AND creatividad	Journal article Language in Spanish or English Full-text availability Psychology subject	186

The search formula was structured considering the descriptors guiding this study, i.e., "concept" and "creativity." Therefore, the final search formula in Spanish, using the boolean operator AND, was: concepto AND creatividad. Given the international nature of some of the resources selected to search for information, specifically the Scopus database, the same search formula used in the previous databases was used in English to obtain as many records as possible. The search formula

DOI: https://doi.org/10.21501/22161201.4015

in that case was: concept AND creativity. Some of the filters considered in the search in the different databases are language, type of documents, full-text availability, and their connection to psychology. The date of publication has not been considered since the subject deals with a concept; thus, all documents are valid regardless of their date. These data can be seen in Table 1.

Established criteria

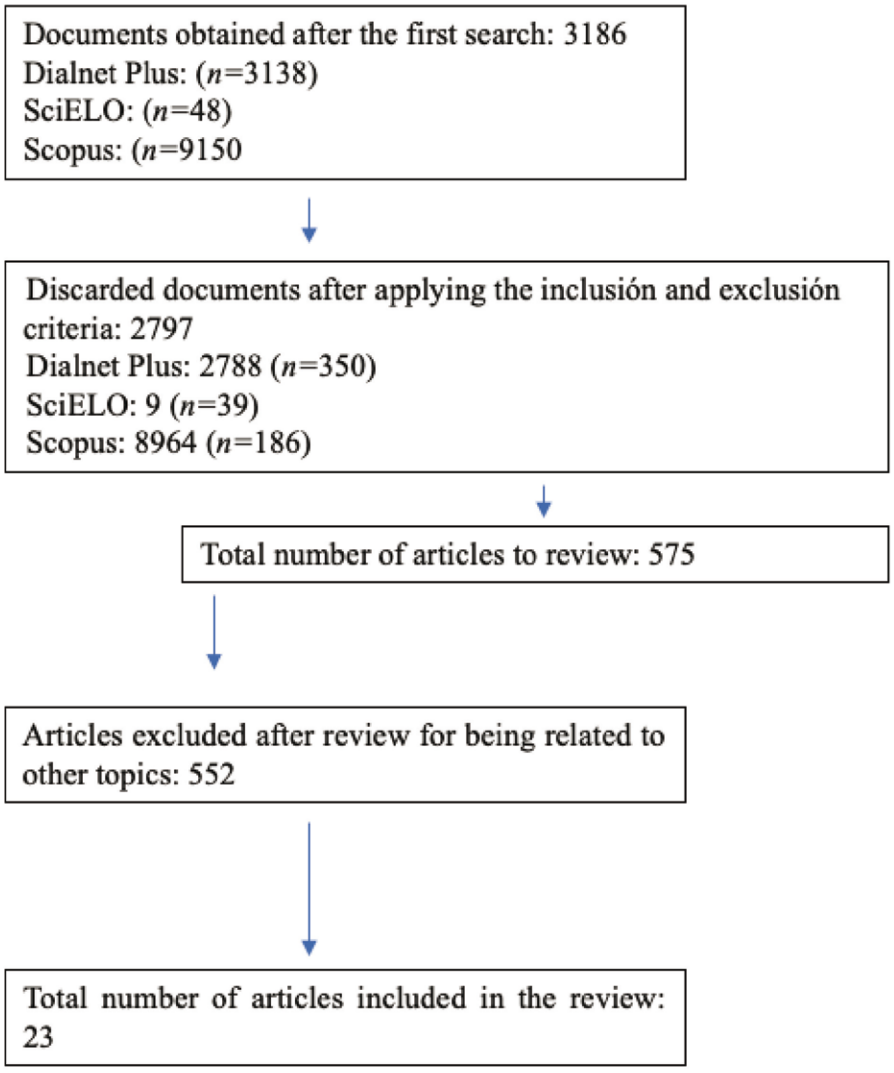
To facilitate the search for documents, a series of inclusion and exclusion criteria have been taken into account. These criteria were established through the PICOS strategy (Landa-Ramírez & Arredondo-Pantaleón, 2014; Richardson et al., 1995). Considering this resource, eligibility criteria were determined based on four variables: participants, research to be conducted, context, and object of the study.

- Participants: Since this is a paper on the conceptualization of a specific construct, the samples of the research were not considered. Therefore, the age, sex or culture of the participants were not relevant for selecting the studies.
- Research to be conducted: The subject of this systematic review is the conceptualization of creativity. Thus, all research providing relevant information on the meaning of the concept was included.
- Context: No specific time frame has been established for the rejection of studies since, as it deals with a concept, it is not possible to establish an exact date of publication, but rather all existing studies should be taken into account to know the variety on one concept such as creativity.
- Object of the study: All the research in the form of a journal article in Spanish or English and related to the field of psychology was accepted. Therefore, documents corresponding to books, book chapters, theses or systematic review articles, as well as those that could not be accessed in full text, were published in a language other than Spanish or English or belonged to a subject other than psychology, were excluded.

Figure 1 shows the procedure followed to select the articles included in this systematic review. To begin with, the initial search without applying filters returned a total of 3,186 results. Once the inclusion and exclusion criteria were applied, the total number was reduced to 389. This last result was the number of documents to be reviewed. After revision, 380 articles were excluded since they were related to other topics, such as gamification, artistic dance or the introduction of ICT to the classroom. Thus, the total number of articles selected for this systematic review is 23.

DOI: https://doi.org/10.21501/22161201.4015

Figure 1. *Flow chart*



Results

After the articles for the systematic review were selected, a summary table was created with the most relevant aspects of those studies (Table 2). The table is divided into four well-differentiated aspects: first, the author(s) who have researched the concept of creativity; second, the definition of those author(s); third, the source of the definition; and fourth, the type of classification it refers to (product, process, person, environment).

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In addition, Table 2 shows how all the definitions of creativity are focused on different variables related to the term, such as intelligence, conflict resolution process, and creation of something new.

First, there is a group of definitions that refer to creativity as the capacity of a person and are focused mainly on intelligence as a characteristic of creativity and, at the same time, of all human beings (Garder, 1998, as cited in Murcia, 2001; Sternberg & Lubart, 1993; Trigo et al., 1999, as cited in Chacón, 2005; Menchén, 2001, as cited in Chacón, 2005; Guilford, 1950, as cited in Corbalán, 2008; Valqui-Vidal, 2009; González & Suárez, 2006, as cited in de la Herrán, 2010a; Corazza, 2016; Taylor, 2019).

There is another group of definitions that understand creativity as a process that aims at resolving a problem (Goñi, 2000, as cited in Chacón, 2005; Mednick, 1962, as cited in Corbalán, 2008; de la Torre, 1991 as cited in de la Herrán, 2009; Young, 1982, as cited in de la Herrán, 2009; Delgado, 2003, as cited in de la Herrán, 2010a; Poincaré, 1908, as cited in Csermely, 2017; Fernández et al., 2019).

Other authors have focused more on relating creativity to the creation of something new; it could be an element or an idea (Haan & Havighurts, 1961, as cited in Chacón, 2005; Fernández-Huerta, 1968, as cited in de la Herrán, 2009; Gervilla, 1994, as cited in de la Herrán, 2010b; Menchén, 2018; Csíkszentmihályi, 1997, as cited in Camic et al., 2018).

In addition, some other authors have related creativity as part of the environment itself (Runco & Sakamoto, 1999 as cited in Corbalán, 2008).

Finally, the studies of Monreal (2000, as cited in Chacón, 2005) and Runco and Sakatomo (1999, as cited in Corbalán, 2008) do not refer to any of the variables previously mentioned but understand creativity as a characteristic applied to people, products, the process or the environment, and that is influenced by the different contexts or experiences the creative person lived.

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Tabla 2.

Summary table of the selected articles

Author(s)	Definition	Source	Classification
Gardner (1998)	Creative people have diverse, original, and unique solutions to their problems.	Murcia (2001)	Person
Goñi (2000)	Sequence of stages or steps followed to solve a problem.	Chacón (2005)	Process
Haan & Havighurts (1961)	Any activity that ends in the creation of something new.	Chacón (2005)	Product
Sternberg & Lubart (1993)	The creative person is someone who generates new and good quality ideas.	Chacón (2005)	Person
Trigo et al. (1999)	Creativity is a human capacity that everyone has.	Chacón (2005)	Person
Menchén (2001)	Natural characteristic of the human mind.	Chacón (2005)	Person
Monreal (2000)	The term creativity applies to people, products, processes and environment.	Chacón (2005)	Product/ Process/ Person/ Environment
Runco & Sakamoto (1999)	Creativity is influenced by different social, evolutionary, and educational experiences.	Corbalán (2008)	Environment
Guilford (1950)	Creativity appears in the behavior of a creative person.	Corbalán (2008)	Person
Mednick (1962)	Creativity is an association of elements.	Corbalán (2008)	Process
Valqui-Vidal (2009)	Every individual has the capacity of being creative. This capacity can be enhanced or diminished in different ways.	Valqui-Vidal (2009)	Person
De la Torre (1991)	Creativity is having ideas and communicating them.	de la Herrán (2009)	Process
Young (1982)	Creativity is the ability to make associations based on known elements.	de la Herrán (2009)	Process
Fernández-Huerta (1968)	Ability to join several elements in a new way.	de la Herrán (2009)	Process
González and Suárez (2006)	Ability developed in a favorable environment that implies a cognitive process in order to solve a problem.	de la Herrán (2010a)	Product/ Process/ Person/ Environment
Delgado (2003)	Creativity is a process that leads to creation.	de la Herrán (2010a)	Process
Gervilla (1994)	Capacity of the humans to produce results that are new and unknown until that moment.	de la Herrán (2010b)	Process
Corazza (2016)	It is an ability vital to all human beings.	Corazza (2016)	Person
Poincaré (1908)	Creativity is the connection made between distant regions of the human knowledge.	Csermely (2017)	Process
Menchén (2018)	It is used to build knowledge from reflective thinking.	Menchén (2018)	Process
Csíkszentmihályi (1997)	The creative processes that originate in creativity are linked to original and tangible production.	Camic et al. (2018)	Product
Fernández et al. (2019)	Creativity is understood as the ability to make hypotheses, try things, and make judgments on the results.	Fernández, Llamas, & Gutiérrez (2019)	Process
Taylor (2019)	Creativity is a capacity that all people possess to some degree.	Taylor (2019)	Person

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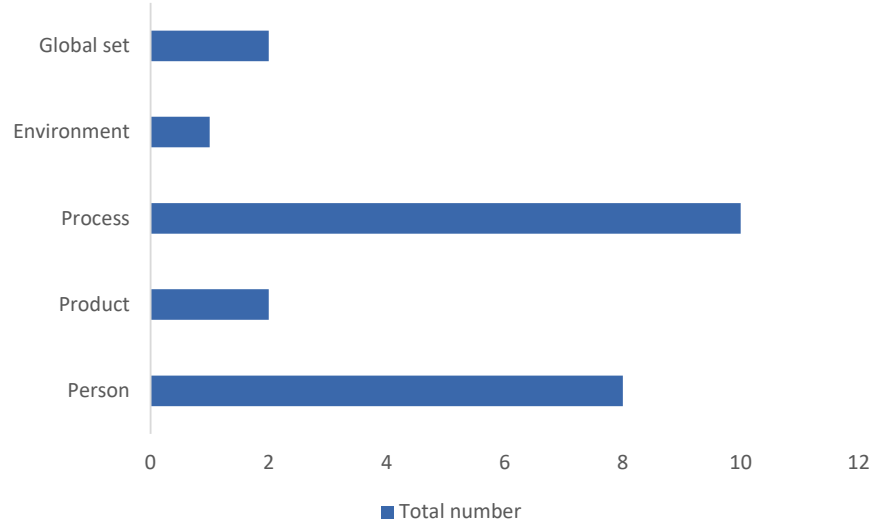
In order to analyze the notion of creativity and to know what is referred to when talking about creativity, Figure 2 has been elaborated. This figure allows observing how, from all the definitions of creativity obtained in the selected studies, most refer to creativity as the mental process used to solve a problem.

Figure 2. *Classification of the definitions of creativity*



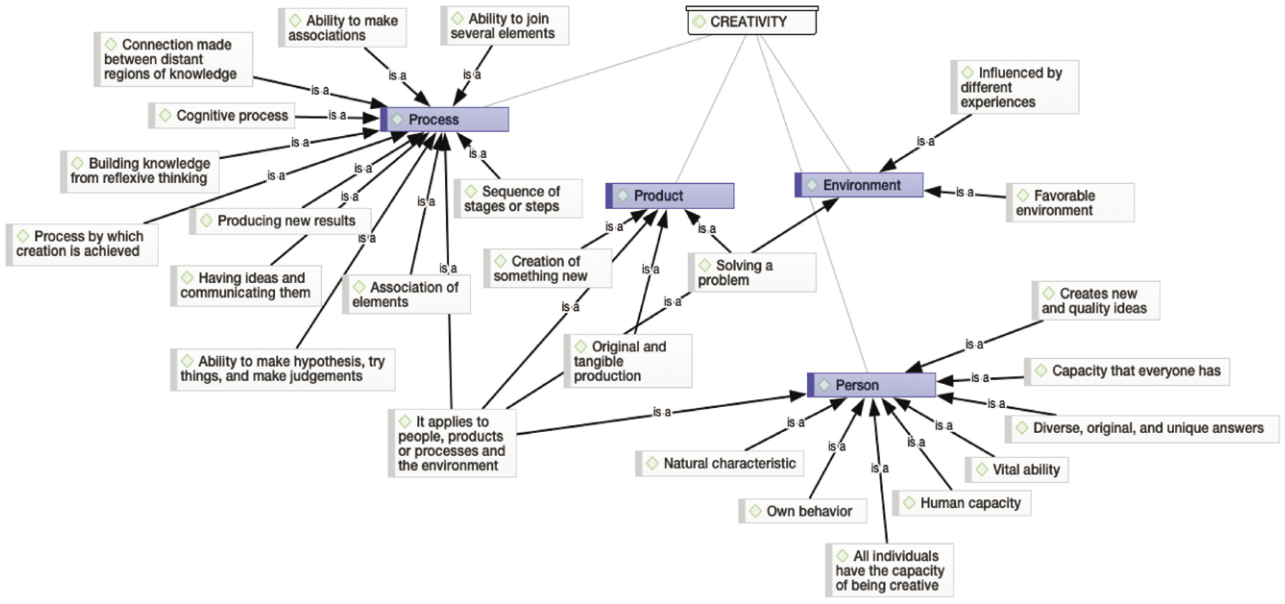
Subsequently, to go deeper into the analysis of the notion of creativity, the most significant elements referred to within the discourse of the meaning of creativity have been extracted in the form of a word cloud (Figure 3).

Figure 3. *Word cloud of the most relevant variables*

DOI: https://doi.org/10.21501/22161201.4015

In addition, a qualitative analysis (Figure 4) was carried out considering the transcription of the diverse definitions of creativity found to prove the existent associations. This figure demonstrates the different classifications within creativity (process, product, environment, person) and presents some of their most relevant characteristics.

Figure 4. *Qualitative analysis of the notion of creativity*



Discussion and conclusions

After analyzing the results of the previous table, a compilation of different authors on the notion of creativity can be observed and, thus, how the notion of creativity is a polysemic phenomenon that has evolved over the years (Corbalán, 2008; Garaigordobil, 2003). In summary, over four hundred definitions of creativity have been collected over the last decades (Cabrera-Cuevas, 2018).

Although many authors have contributed with their ideas to the conceptualization of creativity (Murcia, 2001; Chacón, 2005; Corbalán, 2008; Valqui-Vidal, 2009; de la Herrán, 2009; 2010a; 2010b; Menchén, 2018; Fernández et al., 2019), there is still no general definition that includes all the characteristics of creativity according to all researchers (Hammershøj, 2014). Nevertheless, creativity is understood as the capacity people have to solve problems based on their previous ideas, which integrates original solutions and is influenced by different factors (Krumm et al., 2014; Chiecher et al., 2018; Lara-Posada & Castro-Correa, 2017; Muñoz, 2011).

DOI: https://doi.org/10.21501/22161201.4015

As it has been proved in the results, the notion of creativity can be classified from different points of view, specifically, as a product, a process, a person, and lastly, as an environment, which makes it harder to conceptualize (Barron & Harrington, 1981; Rhodes, 1961; Mooney, 1963; Brown, 1989). This classification originates from Rhodes (1961), and since then, research has been focused on studying the aspects related to this creativity model, such as knowing the personality traits of creative subjects (Plucker & Renzulli, 2009; Wechsler, 2008), discovering the stages of the creative process (Wallas, 1926), explaining the characteristics a product should have to be creative (O'Quin & Besemer, 1999; Puccio et al., 1995), and studying the elements related to the environment (Isaksen, 1995; Scritchfield, 1999; Soliman, 2005).

Moreover, other studies have focused on finding the relationship between these variables to discover how creativity occurs (Urban, 1990; 1995; Treffinger et al., 1990; Sternberg & Lubart, 1993). In addition, in the past, it was customary to relate creativity to artistic production (Berkowitz & Ansari, 2010; López-González & Limb, 2012; Fink et al., 2009) or intelligence (Contreras & Romo, 1989; Pinillos, 1975; Garaigordobil & Torres, 1996), the latter being an extensive debate that has led to the conclusion that creativity and intelligence are not the same but that creativity depends on intelligence for it to be developed efficiently (Guilford, 1956, 1977; Wallach & Kohan, 1965). However, nowadays, other disciplines, such as education, are being considered; thus, the number of studies related to creativity in the school context is increasing (Barrera et al., 2011; Elisondo et al., 2018; Caballero-García & Fernández-García, 2018; Lamana-Selva & de la Peña, 2018; Miranda & Morais, 2019; Solano et al., 2018; Vernia-Carrasco, 2015; Xerach-Pérez, 2014).

In view of the different meanings that have been obtained in the selected studies on creativity, it should be noted that each of the definitions refers to one of the four elements: a person's capacity (Garder, 1998, as cited in Murcia, 2001; Sternberg & Lubart, 1993; Trigo et al., 1999, as cited in Chacón, 2005; Menchén, 2001, as cited in Chacón, 2005; Guilford, 1950, as cited in Corbalán, 2008; Valqui-Vidal, 2009; González & Suárez, 2006, as cited in de la Herrán, 2010a; Corazza, 2016; Taylor, 2019), the process completed through a series of stages (Goñi, 2000, as cited in Chacón, 2005; Mednick, 1962, as cited in Corbalán, 2008; de la Torre, 1991; Young, 1982, as cited in de la Herrán, 2009; Delgado, 2003, as cited in de la Herrán, 2010a; Poincaré, 1908, as cited in Csermely, 2017; Fernández, Llamas, & Gutiérrez, 2019), the creation of an original product (Haan & Havighurts, 1961, as cited in Chacón, 2005; Fernández-Huerta, 1968, as cited in de la Herrán, 2009; Gervilla, 1994, as cited in de la Herrán, 2010b; Menchén, 2018; Csíkszentmihályi, 1997, as citated in Camic et al., 2018), and as environment (Runco & Sakamoto, 1999 as cited in Corbalán, 2008).

These results suggest that the most common when defining creativity is to relate this construct to the creative process that takes place when executing this capacity. This has been the most frequent association among all the definitions of creativity found.

DOI: https://doi.org/10.21501/22161201.4015

After concluding this systematic review, it should be noted that the notion of creativity has been studied by a large variety of researchers, and therefore, the definition of this notion is very ambiguous. Some of the recommendations that can be considered in future research are consulting a larger number of international databases and including other types of documents, such as book chapters, to retieve information from documents different from journal articles.

On the other hand, one of the limitations observed during this review is that most of the research found was from the previous decade since current studies are focused on relating creativity to other variables instead of conceptualizing creativity.

Finally, certain practical implications of this work are developing new models or studies of creativity, knowing the evolution of the concept through time, and identifying different variables within the concept of creativity.

Acknowledgments

This work has the support of the Ministry of Professional Education and Training through the program of grants for Teacher Training (FPU) awarded to Alba González Moreno with code FPU19/01570.

Declaration of authorship contribution

In the research, Alba González Moreno participated as principal investigator and María del Mar Molero Jurado participated as co-investigator.

Conflict of interest

The authors declare that there is no conflict of interest with any commercial institution or association.

DOI: https://doi.org/10.21501/22161201.4015

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