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Creativity and wellbeing in the classroom: a systematic review of intervention programs

Creatividad y bienestar en las aulas: una revisión sistemática de programas de intervención

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ABSTRACT

Creativity and well-being are aspects that are increasingly gaining presence in the educational landscape. In this regard, the objective of this study is to analyse interventions or programs that have been implemented over the last 15 years in the areas of creativity and well-being across various educational stages is emphasized. A bibliographic-analytical method is followed, based on the PRISMA Statement, where the characteristics of studies aimed at improving students' well-being and/or creativity are explored and analysed. Additionally, for the methodological review, the JBI Critical Appraisal Tools were employed. A total of 34 studies were obtained, which explored variables through educational interventions using pretest-post-test designs, control groups, or action research. A high percentage of studies focusing on the promotion of creativity from a general domain, particularly in Early Childhood and Secondary Education, was highlighted as a result. In the realm of creativity, verbal creativity was found to be the specific domain with the greatest presence. The interventions examined show a wide range of approaches, incorporating techniques such as creative problem-solving, arts or movement-based approaches, computational thinking techniques or creative reading and writing activities. Regarding the instruments, the Torrance Test was identified as one of the most recurrent due to its characteristics and widespread use. Finally, the need to continue promoting creative interventions that explore this skill from specific domains and contribute to improving well-being is discussed.

Keywords: creativity, creative thinking, school programs, well-being, positive attitudes

RESUMEN

Tanto la creatividad como el bienestar individual son aspectos que están teniendo una presencia cada vez mayor en el panorama educativo. En ese sentido, se destaca la importancia de analizar las intervenciones o programas que se han llevado a cabo a lo largo de los últimos 15 años en materia de creatividad y bienestar en las distintas etapas educativas. Se sigue un método bibliográfico-analítico basado en la Declaración PRISMA, donde se exploran y se analizan las características de los estudios que han tenido como objetivo la mejora del bienestar y/o de la creatividad del alumnado. Además, para la revisión metodológica se han empleado las herramientas de JBI Critical Appraisal Tools hasta obtener un total de 34 estudios donde se exploran las variables mediante intervenciones educativas. Los artículos siguen diseños de pretest-posttest, grupo control o Investigación-acción. Se obtuvo un alto porcentaje de estudios basados en la promoción de la creatividad desde su dominio general, especialmente en Infantil y en Secundaria. En cuanto a los dominios específicos de la creatividad, la creatividad verbal obtuvo una mayor presencia. Las intervenciones examinadas muestran multitud de enfoques donde incorporar técnicas basadas en la resolución creativa de problemas, en las artes, en el movimiento, en el fomento del pensamiento computacional o en el fomento de la lectura y escritura creativa. Con respecto a los instrumentos empleados, se identifica el Test de Torrance como uno de los más recurrentes debido a sus características y a la extensión de su uso. Finalmente, se

discute la necesidad de continuar promoviendo intervenciones creativas donde explorar dicha habilidad desde dominios específicos y donde contribuir a la mejora del bienestar del alumnado.

Palabras clave: creatividad, pensamiento creativo, programas escolares, bienestar, actitudes positivas

INTRODUCTION

Creativity and wellbeing importance in the educational field has risen recently. According to the Organization for Cooperation and Economic Development (OCED, 2023), each student should be able to practice with their creative ability along different learning stages due to its relevance on cognitive, metacognitive, attitudinal or emotional skills (Corazza et al. 2022; Goleman et al., 2023; Klimenko, 2008; Ros, 2019). The concept of creativity has evolved significantly throughout years, and, among different definitions, they establish a common ground in terms of answering with originality and novelty. Indeed, this ability has been traditionally associated with huge cultural and scientific transformation (BigC), while daily life creativity (little-c) has been overlooked (Kaufman & Beghetto, 2009; Qian et al., 2019).

Moreover, creative experiences are crucial as an environmental determinant of creative development within the educational field. Indeed, "creativity as a process, a personal quality and an ability is aligned with social and creative working and it can only exist in a specific society and culture" (Vyacheslavovna et al., 2016, p. 11715, own translation). The educational sector expresses concern regarding the design of learning situations for developing the creative process (e.g. preparation, incubation, insight, evaluation, verification) through tasks, techniques or resources among different areas, especially due to the artificial intelligence growth whose use could influence on the acquisition of competences (Kurtis, 2021; Goleman et al., 2023; Vicente-Yagüe et al., 2023).

Additionally, Positive Psychology emerges as an approach for the individual well-being study from three fundamental pillars: positive emotions, institutions and traits. Traits theory is encouraged by individual strengths where creativity is included within the virtue of knowledge (Seligman & Csikszentmihalyi, 2014). Furthermore, the role of emotions is key in the educational design of learning situations, especially in the creative ones (Amabile, 2005; Darfler & Kalantari, 2022; Sayalı et al., 2023; Subero & Esteban-Guitart, 2023). Likewise, the concept of flow is attributed to this paradigm as another intersection between creativity and well-being. Flow is defined as a state of concentration and optimal enjoyment where challenge and skill are balanced, hence its presence is beneficial in creative tasks (Csikszentmihalyi, 2018; Isham &

Jackson, 2023). Finally, positive institutions influence creative development due to the promotion of experimentation and lateral thinking provided within a positive climate (Williams, 2020). Therefore, the environment or the context includes, next to emotions and individual traits, a determinant factor to the holistic and creative development of future adults (Sternberg & Lubart, 1991; Valero-Esteban et al., 2024). Nevertheless, how are these aspects promoted in the educational setting?

Agenda 2030 proposes quality education and individual wellbeing from the Sustainable Developmental Goals 3 and 4. In this context, positive education as a branch of Positive Psychology attempts to reach both goals (Adler, 2017; Naciones Unidas, s.f.). Moreover, positive education in the classroom is possible through educational practices not only for well-being promotion but also for creative potential development where idea generation and problem-solving abilities involves the use of conative, cognitive and contextual resources (Sternberg & Lubart, 1991; Lubart et al., 2019).

Therefore, educational programs aimed to attend well-being or creativity (either general or domain-specific) could be analysed to diagnose the presence and the practice of these variables within different stages, areas in educational centres (Goleman et al., 2023). Nevertheless, which program or interventions have been implemented in different educational stages, among the last 15 years, whose aim is to improve well-being and creativity?

METHOD

The general objective of this research is to analyse the nature of creativity and well-being promotion programs published between 2010 and 2024, from Early Childhood to Secondary education.

The research follows an analytic-bibliographic design based on the PRISMA statement (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) where experience and effectiveness of educational programs are examined (Munn et al., 2018; Page et al., 2021). The search strategy begins with articles from the Scopus, Web of Science and Eric databases based on research about creativity and well-being through educational programs through Early Childhood, Primary and Secondary education.

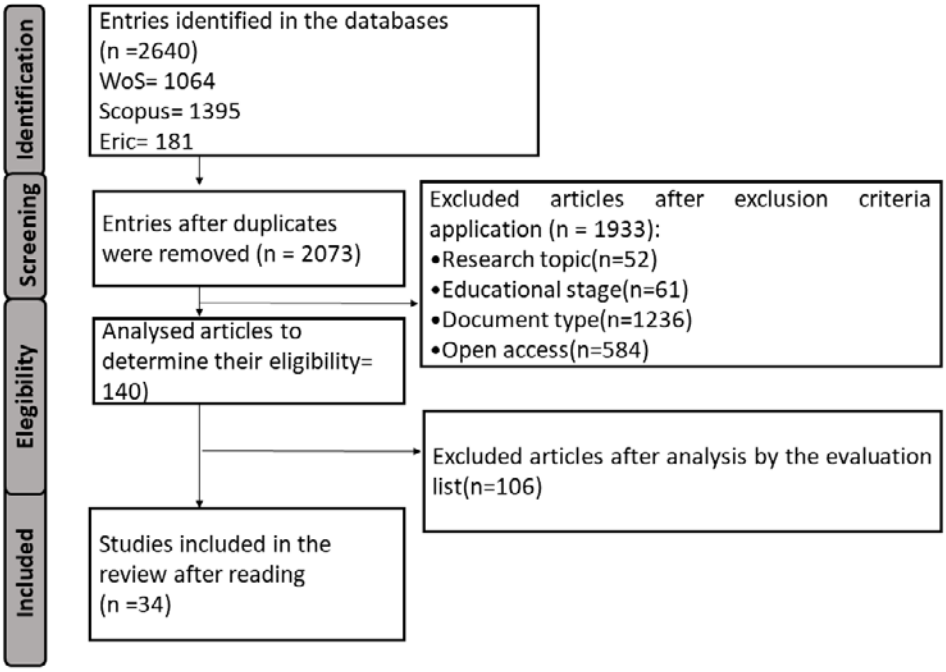
Moreover, filters were applied to refine the selection of articles based on time frame, document type, and keywords aligned with the PICOS framework (Sánchez Meca, 2022): “kindergarden” OR “primary education” OR “secondary education” for participants, “wellbeing” OR “creativ*” OR “insight” OR “creative thinking” OR “imagination” OR “creative ability” OR “divergent thinking” for variables of result; “intervention” OR “program” OR “project” OR “article” for intervention. The comparison aspect is not relevant for this analysis.

Table 1
Inclusion and exclusion criteria

Inclusion criteria	Participants	Early Childhood, Primary and Secondary Education (3-16 years old)
	Intervention	Educational programs related to search terms/ research objective (well-being and creativity). Articles based on pretest-posttest, control/ experimental group designs, action research or questionnaires.
	Publication year	From 2010 January until 2024 May
	Document type	Articles (scientific journals)
	Language	English/Spanish
	Access	Open
Exclusion criteria	Relevance	It is not relevant for the research objective

We obtained a sample of articles that allowed to answer the research question, and we developed its analysis with an evaluation criteria list for quasiexperimental and qualitative research articles to evaluate the bias risk from the articles (Barker et al., 2023; Lockwood et al., 2015). As Figure 1 shows, the procedure of article selection divided into different stages.

Figure 1
PRISMA flow diagram for systematic review



We developed a database to synthesize information about researched educational programs based on the educational stages, participants, methodological design, studied variables and results (Table 2). Furthermore, we analysed the techniques from the intervention's programs and the assessment or data collection instruments used in the included articles.

Table 2
Preselected analysis categories

Category	Definition	Subcategory	Subcategory definition
Stage	Educational period where the teaching practice occurs	Early Childhood Education	0 - 5 year 6 - 12 year 12 - 16 year
Participants	Number of students who participate in the research		
Research method	Methodological techniques used	Control/ Experimental group	Evaluation through comparison between participants performance (control/experimental group). The experimental group participates in the intervention while the control group does not receive the intervention.
		Pretest-post-test	Variable evaluation before (pretest) and after (post-test) the intervention.
		Action research	Program evaluation based on the process or product analysis.
		Opinion questionnaires or interviews	Program evaluation through opinion of involved agents (students and/or educators)
Variable	Subject of study in the program and the article	Creativity	The creativity is researched through its general or specific domain (verbal, mathematical, motor or kinesics, musical…).
		Well-being	It mentions the contribution to accomplishing a well-being state through the educational intervention (emotions, resilience, self-esteem, enjoyment, flow, motivation...)

Categoría	Definición	Subcategoría	Definición de la subcategoría
Result	Information obtained through the article	Differences/ No differences between groups	Result evaluation based on the comparison between groups
		Improvement/ No improvement after the program	Evaluation of the program impact on students
		Contribution of the program	Contribution to the variable's improvement through the analysis of the developed tasks or opinions.

We followed an analysis of the data through the informatic programs SPSS 28.0.1.1(14) and Microsoft Excel using descriptive statistics (frequency and percentage) and an analysis of the qualitative information regarding techniques and evaluation instruments based on the previously established categories.

RESULTS

In the process of analysis of each article, we found that 64.7% of the research articles included a control group along with a prestest-posttest design, followed by 17.6% of studies that employ only the pretest-post-test design, against 5.9% that use only a control group. Moreover, action research studies represent 11.8% of the total articles. We obtained a total of seven subcategories that describe the educational programs depending on the nature of the creativity or well-being variables explored in the research (Table 3).

Table 3
Subcategories for variables

Subcategory	Definition	Percentage
Verbal creativity	Creativity from the verbal perspective (language use). Programs aimed to foster the ability to interpret, analyse, understand or produce written or oral text creatively and critically.	14.7

Subcategory	Definition	Percentage
Motor creativity	Related to creativity from the kinesics domain (movement and corporal coordination).	2.9
Mathematic creativity	Creativity from the domain of logical-mathematical.	2.9
Musical creativity	Creativity from the musical domain.	0
General creativity	Related to creativity from a general perspective. Programs aimed to foster the general creative ability to find different solutions to complex problems.	29.4
Well-being	It is related to the emotional component in terms of regulation and improvement in the inter- and intrapersonal regulations.	11.8
Variables combination	It refers to the combination of different aspects, previously mentioned, whose program aims to be fostered simultaneously.	38.2

Table 3 shows the percentage of each subcategory in terms of programs nature. There is a highest percentage of variable's combination, followed by general creativity one. We highlighted the following combinations: well-being and general creativity (11.4%); well-being and verbal creativity (2.9%); verbal and graphic creativity (2.9%); mathematical and musical creativity (2.9%); well-being and motor creativity (5.7%); well-being and musical creativity (2.9%); well-being, musical and motor creativity (2.9%); well-being, verbal and graphic creativity (2.9%) and well-being, musical and graphic creativity (2.9%). Nevertheless, creativity from different domains represents the lowest percentages: verbal (14.3%), motor (2.9%) or mathematical (2.9%).

Moreover, the tendency or interest of each variable should be highlighted according to the educational stage where they are present. Table 4 shows the frequency and percentage for each stage and variable promoted in the studied programs.

Table 4
Educational stage and studied variables in the research articles

Educational stage	Variables	Frequency	Percentage
Early Childhood Education	Verbal creativity	2	28.6
	General creativity	3	42.9
	Well-being	1	14.3
	Combination of variables	1	14.3
	Total	7	100
Primary Education	Verbal creativity	2	12.5
	General creativity	3	18.8
	Well-being	3	18.8
	Mathematical creativity	1	6.3
	Combination of variables	7	43.8
	Total	16	100
Secondary Education	General creativity	3	42.9
	Motor creativity	1	14.3
	Combination of variables	3	42.9
	Total	7	100
Primary and Secondary Education	Verbal creativity	1	50
	Combination of variables	1	50
	Total	2	100
All stages presence	General creativity	1	50
	Combination of variables	1	50
	Total	2	100

As Table 4 shows, there is a prominence presence of studies where creativity is analysed in its general domain through diverse educational programs aimed towards Early Childhood Education, followed by the presence of verbal domain creativity. Nevertheless, in Primary Education stage, there is a highest percentage of studies with a combination between multiple variables where the more frequent combinations are general or specific domain creativity alongside well-being. Moreover, there is also a

considerable presence of general creativity and well-being independently, specially for the improvement of motivation, self-esteem, interpersonal relationships and physical activity through different educational programs. In Secondary Education, we found the lowest quantity of studies and programs, but general creativity was the highest studied variable. The less studied variables were well-being in Early Childhood Education, mathematic creativity in Primary Education and motor creativity in Secondary Education.

In the case of variable combinations, verbal and graphic creativity are present in Early Childhood Education. In Primary Education there are two programs related to well-being and motor creativity and one program per these combinations: well-being and general creativity; well-being and verbal creativity; musical and mathematic creativity; well-being, musical and motor creativity; and well-being, musical and graphic creativity. Finally, in Secondary Education, we found the combination of general creativity and well-being.

For studies where different educational stages were involved, there are one program based on well-being, verbal and graphic creativity in Primary and Secondary Education. For the category of every educational stage there is one combination of musical creativity and well-being.

Table 5 shows an analysis of empirical studies regarding the explanation of interventions proposed in the articles, evaluation instruments and description about results and interpretations.

Table 5

Empirical studies Analysis

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Hui et al. (2020)	78 students (4 and 5 years old)	Dialogic reading group. Sequence: Prompt-Evaluate-Expand-Repeat. 5 questions technique (Completion, Recall, Open-ended, Wh-words, Distancing). EMPATHICS elements (Empathy, Meaning and Motivation, Perseverance, Time, Habits of Mind, Intelligences, Character Strengths, and Self Factors).	The Peabody Picture Vocabulary Test IV, Edmonton Narrative Norms Instrument Y Storytelling task	Significant difference between groups in the syntactic structures and best results after using the reading material proposed in the program.

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Muñoz-Repiso and Caballero-González (2019)	131 students (from 3 to 6 years old)	Computational thinking exploration with the program called: TangibleK. Use of the robot called *Bee-bot*, sequence creation, action-instruction correspondence and debugging through error detection. Ludic challenges of programming.	"SSS" rubric	Improvement and difference between groups in general creativity related to the problem-solving strategies and computational thinking.
Garaigordobil and Berrueco (2011)	86 students (5-6 years old)	Sessions divided in three stages: opening phase (game objectives), development phase (games for verbal, graphic, dramatic and plastic creativity through cooperative interaction), closing stage (reflection).	*Torrance Test of Creative Thinking* (TTCT), behaviours and personality traits scale.	Difference between groups and improvement in verbal and graphic creativity. Significant improvement in the creative behaviour. No difference among genres.
Bai et al. (2020)	155 students (3-6 years old)	*Thinking Ability Structure Model* program based in three dimensions: content (materials knowledge), method (thinking strategies) and thinking quality (fluency, flexibility, critical evaluation, depth and originality).	TTCT	Improvement in the general creativity, especially in originality and elaboration indicators. Nevertheless, some participants improved in fluency.
Özgenel et al. (2019)	129 participants (48-60 months)	Arts and music enrichment with materials and techniques.	TTCT (figurative)	Creativity improvement for each indicator in 81 participants.

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Piñero Ruiz et al. (2017)	52 Early Childhood Education students	Yoga, tales reading, painting, clay working and Chinese play activities.	Family drawing test (Corman, 1967)	Well-being improvement (virtues and strengths from Positive Psychology).
Skibbe and Foster (2019)	2428 Early Childhood Education partici-pants	Program based on distribution of literary materials among families of participants.	*Phonological Awareness Literacy Screening-kindergarten* and questionnaires	Reading improvements (better results in phonological awareness). No differences among orthographical tasks. Families' satisfaction with the program.
Vicol et al. (2024)	146 fourth grade parti-cipants	Sessions based on creative writing skills (narrative voice, characterization, setting, language, dialogues, image, scenery and plot).	*Creative writing skill assessment grid*	Difference between groups and improvement on verbal creativity.
Azaryahu et al. (2024)	86 fourth grade students	Fractions, rhythmic patterns and creative thinking learning intervention. Music and mathematic combination.	Mathematic and musical test; creative task.	Significant difference between groups (highest score in the experimental group) on the mathematic and musical creativity.
Domínguez Cacho and Castillo Vera (2017)	91 students (45 in fifth grade and 46 in sixth grade of Primary Education)	Free-creative dance program in the Physical Education area along with self-esteem on physical abilities, expression, emotional regulation, interpersonal relationships and self-awareness of the body.	Multimedia y Multilenguaje de Evaluación de la Autoestima (CMMEA) questionnaire (multimedia and multilingual self-esteem evaluation)	Well-being improvement (self-concept and emotional regulation) through motor creativity practice.

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Kobsiripat (2015)	60 participants in scholar age	Use of Scratch for programming and creation of digital media.	TTCT	General creativity improvement through the computational thinking skills development.
Akdal and Sahin (2014)	42 participants of fifth grade of Primary Education	Intervention based on intertextual reading approach.	*Creative Writing Rubric*	Verbal creativity improvement. Originality and vocabulary richness scored the highest in the experimental group.
Ginman et al. (2022)	59 participants (10-11 years old)	Music and movement use. Listening, singing, collaborative writing, creative dance combined activities.	*Social Interaction Test*	Well-being improvements from the social perspective through motor and musical creativity.
Gu et al. (2019)	172 participants (7-12 years old)	Training program based on "Inclination, ideation, Interaction, Identification and Inspiration" (Gu et al., 2019, p. 93-94)	Alternative use, drawing and guessing tasks	General creativity improvement on proposed tasks. All creative indicators improved except flexibility.
Sarria-Martínez et al. (2023)	55 participants (8-13 years old)	Emotional Intelligence development through artistic and musical activities.	TMMS-24 questionnaire	Well-being improvement (emotional dimensions) through graphic and musical creativity.

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Castillo Viera et al. (2021)	294 sixth grade participants	Dramatization techniques (week lessons). Spontaneity, symbolic game, improvisation... Three elements from the dramatic act (presentation, climax and ending).	CMMEA	Well-being improvement. Significant improvement on motivation and emotional expression (especially on the feminine gender).
Hugerat et al. (2020)	188 participants from two Primary Education schools.	Lessons based on science curriculum using didactic games.	Motivation, environment and achievement instruments and interviews.	Well-being improvement (motivation to learn science and the classroom atmosphere perception)
Theocharidou et al. (2018)	32 participants (10 y 12 years old)	Program based on the guided discovery and the divergent production. Movement Laban theory is used for creative dance.	Kidscreen-52 (Kidscreen Group Europe, 2006).	No significant difference in the general well-being variable. There is only an improvement on the mental state and on the learning after the intervention about motor creativity.
Ndiung et al. (2019)	101 fifth grade participants	Intervention based on the creative learning Treffinger model phases and the RME (realist mathematic education) principles.	Assessment rubric, creative thinking ability test, numeric ability test.	Significant difference on creativity between groups (highest score on the mathematic model learning).

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Ponce-Delgado et al. (2024)	200 participants (9 - 11 years old)	Program based on the creative problem-solving methodology (workshop collaboration with Museo Nacional de Ciencias Naturales and el Jardín Botánico Real from Madrid).	*Children's Creativity Test*	General creativity improvement (collaboration among social agents, problem solving, ludic and fantasy improvement activities)
Patan and Kucuk (2022)	15 participants (13 years old average)	Creativity and imagination improvement activities from the science area.	*Nature of Science Student Questionnaire y semi-structured interviews*	Improvement on creative self-concept and the role it plays on the problem-solving strategies.
Kijima et al. (2021)	103 participants (13 - 18 years old) (feminine genre)	Design thinking workshops through problem solving activities (prototypes creations with recycled materials).	Questionnaires based on the interest towards diverse subjects, creative self-confidence, professional plans, growth mindset, failure perception, STEM aspirations and the prosocial construct. Interviews were also used.	Program contribution to verbal creativity and well-being. Improvement on self-confidence creativity, prosocial attitudes and empathy.
Ozkan and Umdu Topsakal (2019)	74 participants (13-14 years old)	STEAM-based program (strength and energy contents)	TTCT	Significant difference on general creativity (verbal and figurative) between groups.

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Zhan et al. (2023)	94 participants (13-16 years)	STEAM-based courses based on the design of two projects (masks and 3D glasses) divided into four phases.	Creative thinking test, Williams's creativity aptitude test (WCAT), Basic Empathy Scale (BES)	Creativity and well-being improvement. Creative thinking and aptitude improvement. There was no significant difference on general empathy against the significant difference for the cognitive empathy.
Salinas-López et al. (2015)	26 participants (8-9 years old)	Didactic unit based on motor creativity. Lessons are structured in pairs, trios or group working tasks.	Creative thinking on action and movement test.	Motor creativity improvement (significant improvement on originality and fluency). Non-significant improvement on imagination.
Morelato et al. (2019)	95 participants (9- 14 years old)	3 phases intervention: emotional identification; associative creativity through images and rhymes; resilience development.	Resilience questionnaire, Problem solving in vulnerability familiar situations (Solución de problemas en Situaciones de Vulnerabilidad Familiar - SPVF), Graphic Creativity Test and Unusual use Test.	Verbal creativity and well-being improvement. Improvement on emotional identification (reduced group), alternative generation to situations and fluency, flexibility and originality indicators. There were no changes on resilience and graphic creativity.

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Jenaro-Río et al. (2018)	32 participants (from 4 to 14 years old)	Group or individual tasks through artistic techniques (painting on canvas, three-dimensional work, recycled-based tasks, illustrated tale creation or stop motion film creation.	PIC-N: Prueba de imaginación creativa en niños (Creative Imagination test in children	General creativity improvement. Flexibility improvement. Significant difference in narrative and general creativity after intervention (experimental group).
Vyacheslavovna et al. (2016)	10 participants (Primary Education and Secondary education)	Artistic technique uses for the expression of students (psychodrama, dance movements, drawing, role modelling). The aim is to activate creative potential and to prepare participants for the workforce.	*"Who am I?" test, "Self-esteem ladder",* questionnaires, action-based analysis, *Vishnyakova's "Creativity" test*	Program contribution to creativity and well-being. Creative self-confidence and motivation improvement in the development of creative tasks. There was an increase of 20% in fifth and sixth grade (11-12 years old).
Litvinova et al. (2020)	65 participants in scholar age	Art-therapy lessons through artistic activities.	*Ilyin tapping test y Heckhausen motivation test*	Well-being improvement. Symmetry of movement improvement. Masculine genre obtained an increase on self-efficacy, strength and lability of nervous system. Expectation of success increased, and the sense of personal inadequacy decreased in the feminine participants. It concludes with the need for gender separation in the creative activities.

Study	Participants	Intervention techniques in the program	Instruments	Results and interpretations
Ruiz Gómez (2021)	20 participants (11 - 13 years old)	Reading workshop through different text types (audiobook, kamishibai theatre and video stories). Reading and writing based activities. Creation and publishing of a collaborative literary result.	Performance analysis and interviews	Verbal creativity and well-being contribution. Lack of reading habits is because of the lack of motivation towards it.
Hyungsook (2015)	26 Primary Education participants (scholar violence victims)	Community use of artistic education for encouraging resilience through expression (stories and video creations through art)	Performance analysis and interviews	Contribution to creativity and well-being (enjoyment, self-esteem and flexible thinking development).
Özer and Doğan (2024)	218 Secondary Education participants	Intervention based on problem solving and creativity tasks alongside scientific literacy	*Views about Scientific Inquiry Questionnaire (VASI)*	Creativity improvement (problem solving process)
Roig Telo and Hofman, (2021)	359 Primary and Secondary Education participants	Intervention with storytelling as a creative technique in the classroom and with a boardgame enhancing the literary and fictional co-creation.	Performance analysis	Verbal creativity contribution.
Jeanneret and Brown, 2012	160 participants (3 - 13 years old)	Musical experiences through the contact with professional musicians.	Opinion questionnaires	Musical creativity and well-being contribution.

The empirical studies analysis establishes that programs or interventions obtained a favourable result regarding verbal and well-being variables. Additionally, the aim of every intervention analysed in the articles is to promote

well-being, creativity or both variables, but there is a conceptual distance among these studies because of the diverse techniques, activities, tools and strategies used and the different evaluation instruments to evaluate the effectiveness. We found creativity assessment tools such as TTCT (Torrance, 1974) or other more domain-specific as creative writing tests (e.g. Bai et al., 2020; Akdal y Sahin, 2014), while for well-being assessment there are tests like Dibujo de la familia (Family Drawing test by Corman, 1967), KidScreen52 (Kidscreen Group Europe, 2006). Indeed, programs are also evaluated through performance and tasks analysis developed by participants.

Didactic program description is based on the development of modules, workshops, lessons or didactic units based on the area or variable to be explored. Verbal creativity is promoted through techniques such as storytelling, *interactive reading*, story creation, rhyme creation, didactic games or family participation (Hofman, 2021; Hui et al., 2020; Morelato et al., 2019; Ruiz Gómez, 2021; Skibbe & Foster, 2019; Vicol et al., 2024); graphic creativity is present through artistic techniques (Jenaro-Río et al., 2018; Litvinova et al., 2020; Morelato et al., 2019; Sarria-Martínez et al., 2023); musical creativity is promoted through dance and contact with *professional musicians* (Domínguez Cacho & Castillo Vera, 2017; Neryl & Brown, 2012). For general creativity, there is an inclusion of problem-solving strategies, creative process teaching or technology and science projects (Bai et al., 2020; Gu et al., 2019; Kijima et al., 2021; Kobsiripat, 2015; Muñóz-Repiso & Caballero-González, 2019; Patan & Kucuk, 2022; Ponce-Delgado et al., 2024; Ozkan & Umdu, 2019; Zhan et al., 2023). The combination of different creative domains is also present like mathematical and musical (Azaryahu et al., 2024) or motor and musical (Ginman et al., 2022; Theocharidou et al., 2018).

Enjoyment, motivation, resilience, interpersonal relationships, emotional awareness or the self-awareness and self-esteem are aspects from intervention whose studied variable is well-being either direct or indirectly (Domínguez Cacho & Castillo Vera, 2017; Hugerat et al., 2020; Hui et al., 2020; Morelato et al., 2019; Sarria-Martínez et al., 2023).

CONCLUSION AND DISCUSSION

The present research article establishes the necessity to analyse the current situation regarding the educational field and its practical programs based on creativity and well-being development. This analysis has the objective to acknowledge didactical practices throughout different educational stages from early childhood to secondary education. Results shows that educational interventions were evaluated through pretest-post-test and control group design, and they also were aimed to evaluate emotional or creative ability. Nevertheless, there are research articles

whose instrument for gathering information was the current program, as proposed by Alves-Oliveira et al. (2022). These publications, in which evaluation is based on the analysis of creative process tasks and final product, represented the lowest percentage of the total studies analysed. This is likely due to the high scientific rigor and complexity that imply the assessment of creative process. (D'Souza, 2021).

There was a high presence of general creativity because of the general domain perspective and the little-c description of creativity (Kaufman & Beghetto, 2009; Qian et al., 2019), as explained in Alves-Oliveira et al. (2022) whose research reviews different creative programs without establishing the specific domain of creativity in any of them. Nevertheless, creative potential is also present in the linguistic domain as expressed in the third category with the highest percentage of studies and the highest present domain. D'Souza (2021) had already proposed verbal creativity through the evaluation of written tasks and its analysis based on narrative characteristic. Furthermore, verbal creativity is encouraged through different methods based on reading and writing skills, aligned with the reading and linguistic competency development (Hui et al., 2020; Piñero Ruiz et al., 2017; Ramamurthy et al., 2024; Ruiz, 2021; Skibbe & Foster, 2019).

PIRLS (*Progress in International Reading Literacy Study*) identifies that reading comprehension process requires the encouragement of cognitive resources to interpret a text, and it involves the use of creativity from the verbal domain (Mullis & Martin, 2019; Jiménez-Pérez, 2024). Hence, literature field proposes the example to enrich the general perspective of creativity by opening a space for specific-domain creative analysis where language and literature complexities are acknowledged (Goleman et al., 2023). Furthermore, literature field propose a contribution to well-being through strategies or techniques like the dialogic reading, debate groups, workshops or intertextual practices where incorporate emotional self-awareness, empathy development of resilience reinforcement (Akdan & Sahin, 2014; Hui et al., 2020; Ramamurthy et al., 2024; Vargas-García et al., 2020).

Results also establish the presence of individual creative and well-being development where both variables are fostered and analysed together. Therefore, this result also supports the existence of well-being and creativity interaction proposed by the Positive Psychology framework where positive traits theory, the flow theory, the positive emotions and institutions are present (Isham & Jackson, 2023; Zhang & Wang, 2024). Indeed, it aligns with Lubart et al. (2019) perspective regarding the role of the emotional condition and experiences as ingredients to encourage creative potential.

Additionally, well-being is present independently in didactic programs interventions through aspects such as motivation, emotional awareness, self-esteem interpersonal relationships, empathy, resilience or virtues and strengths (Losada-Puente et al., 2022). Thus, it supports the idea that emotional, cognitive

and motivational states are key for the learning development and for their future adult life (Darfler & Kalantari, 2022; Valero-Esteban et al., 2024; Sayalı et al., 2023; Subero & Esteban-Guitart, 2023).

For the difference in each educational stage, there is a high presence of research articles based on general creativity in Early Childhood and Secondary Education and it aligns with what Zhang et al. (2024) found in the case of Early Childhood stage as this educational phase is crucial for the individual creative development. In Primary Education stage there is a high percentage of articles based on the variable combination where well-being is noticeable. This result is supported by OECD (2019) proposal regarding the importance of attending the well-being. However, our current research has only found presence in the psychological, social and physical fields against the cognitive and material absence. Moreover, there are few interventions focused on mathematical creativity in primary education, as highlighted by Leikin and Sriraman (2022). Their findings showed high presence of mathematical creative programs based on multiple solutions, open answer, problem proposals and the encouragement of the creative insight.

In Secondary Education stage, the creative presence might be justified by the growing interest by PISA framework (*Programme for International Student Assessment*) on creative thinking evaluation from different fields and, therefore, from its general domain (Palomino & Flores, 2021; OCDE, 2024). Nevertheless, there is a decrease on the number of programs based on well-being compared to Early Childhood and Primary Education stages. This decrease may be attributed to the increasing emphasis on knowledge at the expense of the emotional aspects as students' progress through educational stages (González-Moreno & Molero-Jurado, 2022).

Additionally, Table 5 showed programs that involved an improvement, a significant difference or a contribution to well-being or creativity variables. This finding aligns with Samaniego et al. (2024)'s perspective regarding the need of proposing different pedagogical perspectives to encourage the creative possibilities where we highlight STEAM practices, cooperative project working or challenges from the analysed (Hyungsook, 2015; Kijima et al., 2021; Muñoz-Repiso & Caballero-González, 2019; Ozkan & Topsakal, 2019). In that sense, there will be a holistic improvement on the creative and well-being potential through different innovative experiences that encourage interdisciplinary approaches (Samaniego et al., 2024; Lubart et al., 2019). Nevertheless, Iglesias-Díaz & Romero-Pérez (2021) found that teaching competences are key to create a positive environment in the classroom that contributes to individual and general well-being through participation, cooperation, respect and trust, as expressed in some of the analysed articles (e.g., Castillo Vera et al., 2021; Hugerat at al., 2020; Kijima et al., 2021; Vyacheslavovna et al., 2016; Zhan et al., 2023).

Moreover, general domain creativity is present in research articles where creative process is taught and implemented in the intervention based on phases like preparation, incubation, insight and verification (Kurtis, 2021). These programs evaluate the creative improvements through evaluation instruments used for the general domain (González-López et al., 2024). Nonetheless, results also showed a lowest percentage for specific domain creativity such as verbal, mathematical, motor or musical (e.g., Azaryahu et al., 2024; Domínguez et al., 2017; Vicol et al., 2024).

It is also crucial to mention the combination of computational thinking and general creativity as established by Sánchez-Camacho & Grané (2023), whose results showed a creative perspective from the programming environment of Scratch by encouraging the use of information and communication technologies (ICT) in the classroom from a creative perspective. Indeed, the inclusion of ICT in the classroom establishes the interest on these resources in the educational field due to its current development (e.g. artificial intelligence). Therefore, its incorporation is key for the critical, holistic and creative learning process (Fiallos López et al., 2023; Huang et al., 2023; Murtiningsih et al., 2024; Vicente-Yagüe et al., 2023). Nevertheless, human factor represents a crucial role in the development of didactic and optimal experiences because, according to the Positive Psychology framework, positive relationships contribute to individual well-being within the scholar environment (Peña Julca, 2021). Indeed, interpersonal relationships are identified as an essential element in some of the analysed programs where the combination between creativity and well-being also highlights the connection with positive environment and institutions (Hyungsook, 2015; Ponce-Delgado et al., 2024; Skibbe & Foster, 2019; Williams, 2020).

In the case of well-being factors, González-Moreno y Molero-Jurado (2022) showed the relationship between self-esteem and creativity in different research articles and this result aligns with the current research findings regarding the presence of the well-being through didactic practices based on general or specific domain creativity like creative dance, reading and writing, collaborative or artistic tasks (e.g. Domínguez Cacho & Castillo Vera, 2017; Litvinova et al., 2020; Piñero Ruiz et al., 2017; Sarria-Martínez et al., 2023). In this regard, Ramamurthy et al. (2024) highlighted the importance of promoting reading experiences to reinforce students' resilience and, in the same way, their well-being.

Regarding limitations in this research article, the methodological diversity among the analysed articles might be considered because of the difficulties on comparison and contribution measures. Moreover, due to the conceptual variety in terms of the studied variables, the diversity among evaluation instruments might hinder the comparison between studies results. Additionally, the eligibility criteria exclude documents such as thesis, book chapters or even books as

well as the didactic practice that are analysed from a theoretical perspective. Furthermore, there is no verification of the effect of the programs after the end of the research process and the research publication, so there is no evidence on long-term benefits or drawbacks that these educational programs could have on participants.

In any case, according to the general objective of this research study based on developing a systematic review on creative and well-being programs within 2010 and 2024 from Early Childhood to Primary Education stages, we conclude that there is a need to continue proposing different didactic experiences that encourage creative and well-being development along different stages. Indeed, there is evidence of programs that combine well-being and creativity to answer to the transversal conception promoted within the educational field. This seeks to attend quality in education as proposed in the SDG. Nevertheless, we have established that there is a moderate promotion of creativity from specific areas of knowledge. Hence, the principal implication of this research article for educational practice, regardless of its limitations, is to continue the creation of learning situations based on the creative and emotional development from different areas and different techniques, strategies or tools. This article seeks to be used as a reference not for evidence weaknesses in the scholar field, but to highlight the importance of the educator role and to foster its work towards the design of experiences that foster creativity and well-being in the classroom to highlight opportunities in the quality and positive education field.

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