

Towards Conceptualizations of Musical Creativities in Secondary Education: An Integrative Literature Review 1990-2020

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Abstract:	<p>Creativity has been described as an indissociable component of music education, complex to conceptualize and often overgeneralized. This article provides an overview of existing research on musical creativities in secondary education between 1990 and 2020. 76 articles published in peer-reviewed journals are reviewed according to PRISMA guidelines. To present and discuss the results, several dimensions of creativity research have been clustered into five categories: product, person/group, creative process, context, and domain. 22.37% of the articles focus on the creative process, 14.47% on the context, 13.16% on the person/group perspective, and 1,32% on the product. 48.68% of the studies focus on the domain perspective showing an emphasis on specific activities traditionally associated with musical creativity like composing or improvising. Music listening is not present, and various forms of musical creativities are underrepresented. Over these three decades, an increasing orientation on teaching and learning within a sociocultural framework can be observed. In addition, the pedagogical challenges concern an expanded vision of creativity albeit based on a specific and precisely defined framework.</p>

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Appendix 1. Articles that met the inclusion criteria.

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For Peer Review

Towards Conceptualizations of Musical Creativities in Secondary Education: An Integrative Literature Review 1990-2020

Creativity has been described as an indissociable component of music education, complex to conceptualize and often overgeneralized. This article provides an overview of existing research on musical creativities in secondary education between 1990 and 2020. 76 articles published in peer-reviewed journals are reviewed according to PRISMA guidelines. To present and discuss the results, several dimensions of creativity research have been clustered into five categories: product, person/group, creative process, context, and domain. 22.37% of the articles focus on the creative process, 14.47% on the context, 13.16% on the person/group perspective, and 1,32% on the product. 48.68% of the studies focus on the domain perspective showing an emphasis on specific activities traditionally associated with musical creativity like composing or improvising. Music listening is not present, and various forms of musical creativities are underrepresented. Over these three decades, an increasing orientation on teaching and learning within a sociocultural framework can be observed. In addition, the pedagogical challenges concern an expanded vision of creativity albeit based on a specific and precisely defined framework.

Keywords: creativity; secondary education; music education; integrative literature review

1. Introduction

Creativity has become an iconic and global phenomenon in the field of education, and a priority in the field of research for the last thirty years. In this sense, Craft (2005) points out two “waves” of creativity in education: the first during the 1960s, based on a long line of child-centred policies, philosophies and practices, which are in line with

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3 pioneering pedagogical approaches to music creation by Schafer (1965) or Paynter and
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5 Aston (1970). The second wave, in the late 90s, was preceded by policy initiatives
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7 integrated into curricula, growing interest in education research, and the support of the
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9 business world in terms of creativity's importance. Increasing interest in creativity is
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11 reflected in the exponential growth of research since the 2000s (Hernández-Torrano &
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13 Ibrayeva, 2020; Randles & Webster, 2013)
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17 The complexity of this multifaceted phenomenon has been approached within a
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19 sociocultural framework (Glăveanu, 2019), conceived as *creative action* (Glăveanu &
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21 Beghetto, 2021) where psychological, behavioural, social and cultural aspects operate
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23 simultaneously, putting forward systemic and dialogical aspects of creativity as results
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25 of dynamic interactions (Glăveanu, Sierra & Tanggaard, 2015; Glăveanu & Beghetto,
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27 2017; Glăveanu, 2018). This corresponds to the pluralization of creativity in a variety of
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29 domains, processes or styles (Sternberg, 2005), extended into music education through
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31 diverse forms of authorship (Burnard, 2012).
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35 By emphasizing the procedural and plural nature of music, different ways in
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37 which musicians are creative through composition, improvisation, performance,
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39 listening, producing, etc. can be shown (Hill, 2018; Randles & Burnard, 2022).
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41 Approaches to creativity as a thinking skill have been present in music education
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43 research since the 1990s, leading to several models of the individual cognitive process
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45 (Webster, 1990, 2002). During the last two decades, growing attention has been put on
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47 the socio-constructivist framework for teaching and learning, highlighting the role of
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49 group work and teacher-learner interactions (Giglio, 2015).
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53 From the seminal Rhodes (1961) 4 P's framework from a cognitive and
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55 individual perspective (personal, process, press, referred to context and product),
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57 Glăveanu (2013) proposes a framework from sociocultural and ecological psychology
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3 in a dynamic integration of 5 A's: actor, action, artifact, audience and affordances. A 7
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5 C's framework including creators, creating, collaborations, contexts, creations,
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7 consumption and curricula is presented by Lubart and Thornhill-Miller (2019).
8
9 Sternberg and Karami (2021) extend the framework to 8 P's: purpose, person, problem,
10
11 process, product, propulsion and public. Four main dimensions of creativity have been
12
13 identified in music education literature: studies looking at the creative person, the
14
15 process, the context and the assessment of the creative product (Hickey, 2002; Odena,
16
17 2012a, 2018). Randles (2020) suggests 5 P's: person, product, process, press, and
18
19 position.
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24 Teachers' understanding of creativity seems to be wide and rather incomplete in
25
26 general education (Mullet et al., 2016), which is in line with the overgeneralization and
27
28 the need for specific categories and definitions within the field of music education
29
30 (Odena, 2012b; Philpott, 2007). As pointed out by Sachsse (2020), the growing interest
31
32 in creativity in music education can be linked to a more general occidental societal
33
34 phenomenon: the injunction to become creative. He argues for a critical and clear
35
36 position towards music invention activities and creativity in music education.
37
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39

40 Our contribution attempts to highlight the relation between musical creativity
41
42 and specific pedagogical approaches in secondary education, characterized by a rather
43
44 small corpus of studies. Even if a growing number of contributions on creativity are to
45
46 be found in peer-reviewed journals (Strand, 2017), educational research in
47
48 improvisation, as an example, seems to be still relatively underdeveloped (Larsson &
49
50 Georgii-Hemming, 2018; Siljamäki & Kanellopoulos, 2019).
51
52
53

54 The aim of this study is to get a profound understanding of research since 1990,
55
56 to identify and relate key concepts in literature and draw conclusions for further
57
58 practice-oriented research and pedagogical practices. In addition, the aim is to provide a
59
60

1
2
3 mapping of topics, methods and concepts related to music in secondary education. This
4
5 review takes into account activities described as composition, improvisation, creative
6
7 music making and creative music listening. The following research questions (RQ) are
8
9 identified:

10
11
12 (1) What are the research trends in creativity for secondary music education between
13
14 1990 and 2020?

15
16
17 (2) How is musical creativity implicitly or explicitly understood and/or defined in the
18
19 research articles about secondary music education in the last three decades?

20
21
22 (3) What are the core themes and main challenges for music teaching and learning?
23
24
25

26 **2. Methods**

27
28 This integrative review (Whittemore & Knafl, 2005) aims to develop inductive and
29
30 interpretative forms of knowledge synthesis from a mixed methods approach, and
31
32 proposes new perspectives for the field (Torraco, 2016). This study was guided by the
33
34 PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses)
35
36 checklist, considered appropriate for quantitative and mixed methods studies (Urrútia &
37
38 Bonfill, 2010) and eMERGe meta-ethnography reporting guidance, focused on
39
40 qualitative reviews (France et al., 2019).
41
42
43

44
45 The review was carried out on a search of Web of Science (WOS) and SCOPUS
46
47 bibliographic databases. A series of keywords were established from their previous use
48
49 in high-impact work related to the object of study: “Creativity”, “Secondary school”,
50
51 “Composition”, “Improvisation”. Finally, using the Boolean operators "OR" and
52
53 "AND" the following search equation was formulated and applied to both databases:
54
55 (“Music” AND “Creativity” OR “Composition” OR “Improvisation”) AND
56
57 (“Education” OR “Secondary School”). In addition, after checking that not all issues of
58
59
60

1
2
3 indexed journals were included in the period of the systematic review of the present
4
5 study in WOS and SCOPUS, a specific search was conducted in the following journals
6
7 of music education and creativity in education: British Journal of Music Education,
8
9 Bulletin of the Council for Research in Music Education, International Journal of Music
10
11 Education, Journal of Creative Behaviour, Journal of Research in Music Education,
12
13 Journal of Music Teacher Education, Musicae Scientiae, Music Education Research,
14
15 Journal of Music Teacher Education, Musicae Scientiae, Music Education Research,
16
17 Psychology of Music, Research Studies in Music Education, Thinking Skills and
18
19 Creativity.

20
21 The inclusion criteria were established as follows: (1) empirical research studies
22
23 with data collected through quantitative, qualitative or mixed methods; (2) studies that
24
25 analyse and explore explicitly or implicitly the phenomenon of creativity; (3) articles
26
27 developed in secondary schools settings, based on compulsory or elective secondary
28
29 programs from both teaching and learning perspectives; (4) peer-reviewed journal
30
31 articles in English, to ensure a standard of quality and reliability, published between
32
33 January 1990 and December 2020. The exclusion criteria were based on the following
34
35 selection: (1) conference papers, book chapters, or books; (2) practitioner reports or
36
37 description of teaching experiences without empirical research; (3) theoretical or
38
39 literature review articles.

40
41 The search identified 12135 items. 152 articles were considered relevant after the first
42
43 screening from the reading of the title and abstract by author 1 and 2, following the
44
45 inclusion criteria 2 and 4, and excluding those with explicit information in the title or
46
47 abstract related to inclusion criteria 3. After a careful reading of the 152 articles
48
49 identified and approved in the first screening, 25 articles were excluded in relation to
50
51 the inclusion criteria 1 as not based on empirical research, but as a description of
52
53 teaching experiences (24), or historical research (1). In relation to exclusion criteria 3,
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3 12 articles were excluded as theory-based articles, and 5 as literature review articles.
4
5 This left 108 articles. In relation to inclusion criteria 2 and after careful reading, 6
6
7 articles were excluded as not based on the topic of creativity in secondary music
8
9 education. Then, 26 articles were excluded following the inclusion criteria 3, as not
10
11 being related to music in secondary schools. A total of 76 articles were finally selected
12
13
14 (see Appendix).

17 **Figure 1**

21 *Flow Diagram*

26 The contextual and methodological perspectives in research question 1 (RQ1)
27
28 were analysed descriptively through frequency and percentage, and VOSViewer
29
30 software. The full-text articles were coded and approved by author 1 and 2 according to
31
32 the inductive categories established ad-hoc considering the studied phenomena: a)
33
34 General information (date, journal author, country), b) Research methods and design
35
36 (quantitative, qualitative, mixed), c) Focus on a specific category of participants
37
38 (students, teachers, others), d) Topic (improvisation, composition, creativity in general,
39
40 others), e) Article content (context, student characteristics, tools used, music
41
42 style/genre, semiotic resources), f) Implication for practice.

46 Inductive categories related to creativity were established to analyse the topics
47
48 on literature and the implicit or explicit conceptualization of creativity in order to
49
50 answer RQ2. The results are presented using categories inspired by existing models of
51
52 creativity, especially by Lubart et al. (2003) and Glăveanu (2013): person/group,
53
54 process and product, as well as the context (conative and socio-cultural dimensions).
55
56 These categories are completed according to our particular focus on music education
57
58
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1
2
3 using domain-specific terms such as composition, improvisation, teaching and
4 assessment. The final categories are (1) Product, referring to musical creations; (2)
5 Person-group, referring to group interactions and individuals; (3) Process, referring to
6 the creative process; (4) Context, referring to the social environment, conative elements
7 and affordances; (5) Domain, in relation to teaching and learning composition,
8 improvisation and teaching creativity. Categories have been coded and agreed on by
9 author 1 and 2 by using Atlas.ti8 software.

21 **3. Results**

22 **3.1 Research study characteristics**

23
24 The evolution of the year of publication of the articles shows an upward trend from
25 1995 to 2004, and a slight and very gradual decline from 2004 to 2020 (see figure 2).

26 **Figure 2**

27 *Evolution of the Publication of Articles on Creativity*

28
29 The vast majority of the selected articles have been published in five journals: (1) the
30 British Journal of Music Education, BJME (n = 19, 25%); (2) Music Education
31 Research, MER (n = 15, 19.74%); (3) Research Studies in Music Education, RSME (n =
32 12, 15.79%), (4) International Journal of Music Education, IJME (n = 8, 10.53%); and
33 (5) Journal of Research in Music Education, JRME (n = 7, 9.21%). In relation to the
34 nationalities of first authors' universities, a large majority are from the United Kingdom
35 (n = 39, 51.31%), followed by the USA (n = 12, 15.79%), Australia (n = 8, 10.52%),
36 Spain (n = 5, 6.58%), New Zealand (n = 4, 5.26%) and Hong Kong (China) (n = 3,
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3 3.94%). Figure 3 shows the frequency of authors who have the most published on the
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5 topic (n = 73; 2 and more articles per author).
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7

8 **Figure 3**

9 10 11 12 *Publishing Authors*

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17 As can be seen in the above figure, the author who has written the most single-
18 and co-authored articles is Pamela Burnard, who is one of the international references
19 for this research topic, as is Martin Fautley, who is the next most published author.
20
21

22
23
24 The research design of the selected articles is mainly qualitative (n = 61,
25 80.26%), followed by quantitative (n = 8, 10.53%) and mixed methods (n = 7, 9.21%).
26
27 In this sense, it is not possible to establish unified criteria to perform a meta-analysis,
28 since the disparity in results presented does not allow us to compare the data collected.
29
30 It has been found that some of the articles that claim to have a quantitative or mixed
31 design do not offer the psychometric values of the measuring instruments developed,
32 nor do they offer inferential statistical analyses, although they include descriptive
33 statistics (frequencies and percentages).
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42 Moreover, 75% (n = 57) of the articles are focused on the students, while
43 21.05% (n = 16) are focused on the teachers. 3.95% (n = 3) are focused on both students
44 and teachers. In relation to the domains, 76.32% (n = 58) of the articles focus on
45 composition. 9.2% (n = 7) focus on improvisation, while articles focused both on
46 composition and improvisation represent 5.26% (n = 4) of the total. 9.21% (n = 7) of the
47 articles focus on creativity as a phenomenon (see Figure 4).
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Figure 4*Evolution in Creativity Domains***3.2 Conceptions of creativity**

Explicit conceptions of creativity as a phenomenon can be found in 9.21% (n = 7). These articles were published during the 2000s (n = 4, 57.15%) and the 2010s (n = 3, 42.85%). 48.68% (n = 37) focus on the domain perspective, from which 22.37% (n = 17) focus on teaching composition, 11.84% (n = 9) on teaching creativity, 7.89% (n = 6) on learning composition and 6.58% (n = 5) on learning improvisation. 22.37% (n = 17) focus on the creative process perspective; 14.47% (n = 11) on the context; 13.16% (n = 10) on the person/group perspective, from which the 60.00% (n = 6) on the group interaction and 40.00% (n = 4) on the individual. In relation to evolution on dimensions, interest in the creative process during the 2000s can be highlighted (14.47%, n = 11), and during the 2010s (9.21%, n = 7). The classification in decades can be observed in figure 5.

Figure 5*Creativity Taxonomy*

The understanding of musical creativity is considered as a key and complex issue for teachers. In this sense, Burnard (2012) underlines its “multiplicity of forms, fluid roles and meanings defined in contemporary popular musics” (p. 8). Furthermore, Crow (2008) identifies the tensions between the general domain conceptions of creativity as an educable competence and the specific role of music knowledge in

1
2
3 creative learning. A distinction is established between approaches of creativity coming
4 from the conceptualization of artistic creativity, and those inspired by the concept of
5 everyday creativity with educational purpose, considering creativity “as imagination
6 successfully manifested in any valued pursuit” (Odena & Welch, 2009, p. 417).
7
8 Creativity has been approached implicitly or explicitly as a socio-cultural phenomenon,
9 from which emerges a dichotomy between individual and group forms of creativity.
10
11 Individual creativity is based on the conception of composing following the romantic
12 ideal (e.g., Odam, 2000). Creativity as a distributed and collective activity, from the
13 perspective of the social nature of music education, has been observed for two decades.
14
15 In order to enhance the group/individual dimensions of creativity, co-constructing, co-
16 authoring, and distributed perspective of creativity are evidenced in literature (e.g.,
17 Faulkner, 2003; Hopkins, 2015). Different forms of creativity emphasizing its
18 sociocultural nature have been described as communal and collaborative creativity
19 (Burnard & Dragovic, 2014; Burnard & Dragovic, 2015) or participatory creativity
20 (Lage-Gómez & Cremades-Andreu, 2020). Collaborative creativity is based on
21 subjects’ interactions, whereas participatory creativity focuses on the participatory
22 interrelationships between all aspects of the teaching and learning process. All these
23 dimensions are integrated in the following co-occurrence of the keywords analysis
24 figure.

25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 **Figure 6**

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51 *Co-occurrence Keywords of the Publications*
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3.3. *Dimensions of creativity for music teaching and learning*

3.3.1 *Creative Process and the Product*

It is of note that the *product* is rather absent in studies, except that of Pilsbury and Alston (1996). The process in composition activities emerges as the central issue in the literature. In this vein, several authors propose linear models in different phases such as Kennedy (2002), Fautley (2005a) and Hopkins' (2019) based on Fautley's. Another perspective concerning creative process is to describe it as dynamic and cyclical (Burnard & Younker, 2002). Mellor (2008) also corroborates this perspective with ICT-based composition, as do Lage-Gómez and Cremades-Andreu (2020) in soundtrack cooperative composition, or Kaschub (1997) in a choral setting. The importance of listening has been underlined as key in the creative process (Kennedy, 2002) together with reflection (Kokotsaki, 2011). In addition, the importance of the creative process as a tool to orient students in composition has been pointed out by Hopkins (2019).

Creativity launches and frames the space of creative possibilities through dynamic processes, as suggested by Mellor (2008). In this sense, divergent thinking is described as relevant in composition tasks from a perspective of artistic creativity (Leung, 2004), building on prior knowledge (e.g., Fautley, 2005a). Berkley (2004) underlines and summarizes the balance between divergent and convergent thinking from a problem-solving perspective.

Mellor (2008) suggests a differentiated individual approach to composing regardless of participants' backgrounds. On the contrary, Seddon and O'Neill (2003) report differences between and within composition strategies depending on students' backgrounds, especially in terms of the length of "exploratory" behaviour (Seddon & O'Neill, 2003).

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2
3 The importance of classroom talk within the process is underlined by few
4 studies (Burnard, 2000a, b, 2002; Burnard & Younker, 2002). Major (2008) analyses
5 talk in composition, identifying six main types of talk in the composing process. This is
6 in line with Leung (2004) who criticizes a lack of reflection about musical concepts and
7 metacognition.
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17 **3.3.2 Individual vs group procedure (Person)**

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19 38.15% (n = 29) of the selected articles focus on group work as the learning
20 procedure, whereas 21.05% (n = 16) focus on individual work. 1.31% (n = 1) of the
21 articles are based on both individual and cooperative work and in 38.15% (n = 29) this
22 distinction is not mentioned (see Table 1).
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28 **Table 1**

29 *Frequencies and Percentages of Learning Strategies According to the Topic*

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37 In this sense, research about a series of elements in the social sphere is
38 emphasized in literature, analysing the role of collaboration or interaction (e.g.,
39 Faulkner, 2003). Gilbert (1995) discusses the value of cooperative work in creative
40 tasks, demonstrating their benefits in the classroom atmosphere. The author also focuses
41 on interpersonal skills and knowledge, and alerts readers to the issue of individual
42 accountability and noise.
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51 In relation to group procedure, Hopkins (2015) finds a weak or non-significant
52 correlation between music performing, composing experience and final quality of the
53 score. On the contrary, Lage-Gómez and Cremades-Andreu (2020) relate students'
54 satisfaction and identification with the product and the creative experience. McGillen
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3 (2004) and colleagues (McGillen & MacMillan, 2005), investigate the cooperative
4 composition processes of a group of adolescents in a rural school in Australia. The
5 authors suggest the contribution of cooperative composition to the development of
6 students' self-perceptions as authors. Music self-concept was found to be significantly
7 related to compositional experience (Randles, 2010). Thorpe (2018) found a
8 relationship between students' identities, their achievement in group composing, and
9 socioeconomic disparity. Moreover, age and formal music training affect the choices
10 made by students during the compositional process, as well as their aesthetic response
11 (Carlin, 1997).
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24 In relation to musical style from an individual or group perspective, Allsup
25 (2003) points out classical music as an unproductive style for group composing or
26 community-making.
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33 ***3.3.3 Context: conative elements, learning environment, affordance***

34
35 From the conceptualization of composition as a form of social action, largely
36 adopted in literature, emerges the importance of a series of social aspects in the creative
37 process. Motivation is connected to ICT-based composition (Chen, 2020), curriculum
38 integration (Cuervo, 2018). The task also has an impact on students' intrinsic
39 motivation (Leung, 2004). Thorpe (2018) states that motivation to compose in a group
40 setting may not necessarily be driven by the extrinsic rewards of a school qualification,
41 but rather by the enjoyment of social music making. In a similar sense, Lage-Gómez
42 and Cremades-Andreu (2020) point out procedural and group mechanisms as relevant to
43 encouraging students' motivation. This perspective relates to the emergence of positive
44 emotions at a multidimensional level, which is corroborated by Burnard and Swann
45 (2010), who underline the emotional dimension in learning in collaboration with artists
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3 and the importance of the context for learning. In relation to motivation, the quality of
4 time spent is correlated with a degree of satisfaction and enjoyment (Hopkins, 2015).
5
6 Mawang et al. (2018) point out correlations between goal motivation and musical
7
8 creativity which are positive between creativity and deep processing strategy, but
9
10 negative between creativity and surface processing strategies.
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14
15 The connection between engagement, participation, transformation, democracy,
16
17 and empowerment is identified by Burnard and Dragovic (2014), emphasizing
18
19 wellbeing and group improvisation. In this sense, a high degree of concentration,
20
21 motivation and positive emotions emerges, contributing to pupils' wellbeing (Lage-
22
23 Gómez & Cremades-Andreu, 2019). Burnard (1995) describes the influence of task
24
25 design, compositional context and students' experience of constraint and freedom. Della
26
27 Pietra and Campbell (1995) suggest the evidence of an evolving sensitivity to the
28
29 improvisation process.
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33
34 As an aspect of affordance, the use of technology emerges as a key issue in the
35
36 analysed articles. In the 1990s, the role of resources (Rogers, 1997) and changes in
37
38 pedagogical practice (Ellis, 1995) are discussed.
39

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41 The analysis of the link between informal learning and use of technology leads
42
43 Folkestad, Lindström and Hargreaves (1997) to the conclusion that schools should offer
44
45 an appropriate context rather than teaching a specific strategy for composing. They
46
47 point out differences in students' approaches regarding previous experience or gender.
48
49 Pedagogical practice can be redefined through the understanding of creativity,
50
51 originality, and identity within computer-based composition (Mellor, 2008) or by
52
53 careful analysis of professional composers' work as described by Savage (2005). This
54
55 author considers the use of ICT as an enriching and challenging experience in the face
56
57 of curriculum change, necessitating teachers' adaptation. Other aspects like motivation
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3 for learning (Chen, 2020) or the development of thinking and learning strategies
4 (Agustyniak, 2013) are pointed out during the last decade. Devaney (2019) underlines
5 the prevalent use of technology in composing in the UK, summarizing positive and
6 negative aspects. Technology as a linear and unrealistic “shortcut” for composition can
7 be seen as negative for musical creativity. On the contrary, live performance or other
8 real activities using ICT connect students to the world and bring meaning and life to the
9 music classroom (Bolden, 2009; Wise, Greenwood & Davis, 2011; Wise, 2016).
10 Technology is considered as a factor that can democratize composing, especially for
11 students without formal musical training (Ward, 2009). For teachers, the challenge
12 resides in planning tasks in e-learning (Chen, 2020). Beyond pedagogical and technical
13 knowledge, teachers' beliefs and attitudes are identified as influential factors for the use
14 of ICT (Wise, Greenwood & Davis, 2011).

3.3.4. *Composition and Improvisation*

35 76.32% (n = 58) of the analysed articles focus on composition: 17 (89.47%)
36 during the 1990s, 24 (77.41%) during the 2000s, and 17 (64.00%) during the 2010s. A
37 decline can be observed in the percentage of published articles based on composition.
38 The majority of articles based on composition during the 90s are centred on teaching
39 (domain perspective) (n = 4, 23.53%) and learning composition (n = 4, 23.53%),
40 together with the creative process (n = 3, 17.64%). During the 2000s, there is a shift into
41 the creative process (n = 10, 41.66%), and person/group based on group interaction (n =
42 6, 25%). The majority of the articles in the 2010s focus on teaching composition (n = 8,
43 47.05%), creative process (n = 4, 23.52%) and context (n = 3, 17.64%). The majority of
44 the articles based on improvisation (n = 7, 9.21) were published during the 2010s,
45 57.14% (n = 4), 14.28% (n = 1) in the 90s and 28.57% (n = 2) in the 2000s. On the
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3 contrary, an increase of the published articles based on improvisation is observed. Of
4 the 4 articles focusing on both composition and improvisation, 5.26% (n = 4), 2 are
5 published during the 2000s (n = 2, 50.00%) and 2 during the 2010s (n = 2, 50.00%).
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10 In this sense, composition and improvisation are identified as the core activities
11 connected to musical creativity, also related to listening and performance (e.g.,
12 Kokotsaki, 2011). The importance of listening in composition (Kennedy, 2002; Fautley,
13 2005a) and improvisation (Augustyniak, 2014) is underlined as enhancing students'
14 musical skills and holding a central position in creative processes. Moreover, strong
15 correlations between performance and composition were identified as related traits
16 (Fowler, 2014).
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26 Composition in the classroom has been described as a plural musical procedure
27 in terms of: (1) a temporal and non-verbal artistic construction (e.g. McGillen &
28 McMillan, 2005); (2) a sociocultural action, involving a series of conative aspects such
29 as student motivation (e.g. Lage-Gomez & Cremades-Andreu, 2020), classroom
30 atmosphere (e.g., Kaschub, 1997); (3) problem solving procedure (e.g., Berkley,
31 2001,2004; Burnard & Younker, 2004); (4) a vehicle for the development of creative
32 thinking (e.g. Fautley, 2005a); (5) a tool for music language learning (e.g. Blom, 2003).
33 The role of composition in the curriculum is considered to be an interesting addition,
34 but secondary, compared to knowledge and skills to be learned in the music classroom
35 (Berkley, 2001).
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49 According to Burnard (2000 a, b), composition and improvisation might be
50 described as distinct and separate, or interrelated and indistinguishable. Nevertheless,
51 improvisation can also be considered as a part of composing procedure (Blom, 2003).
52 Norgaard, Stambaugh and McCraine (2019) point out the importance of adding
53 improvisation activities to the curriculum, and the need to develop them (Kokotsaki,
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3 2011). Musical skills such as auditory memory, listening (Augustyniak, 2014) and
4
5 cognitive flexibility (Norgaard, Stambaugh & McCraine, 2019) are encouraged in
6
7 improvisation and linked to performance (Burnard & Dragovic, 2014). The importance
8
9 of an exploratory and experimental perspective in group improvisation, related to
10
11 dialogical theory in group improvisation, is highlighted by Lage-Gómez and Cremades-
12
13 Andreu (2019). McPherson (1993) suggests that kinesthetic factors have an influence on
14
15 improvisational ability, but no influence on performance proficiency. Gender is not
16
17 found to be a factor. Learning another instrument, mentally rehearsing music and
18
19 participating in singing activities favour the ability to improvise. An emphasis on
20
21 improvisation may improve aspects of executive functions (Norgaard, Stambaugh &
22
23 McCraine, 2019), and at the same time foster creating and performing students' music
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25 rather than the established repertoire (Burnard & Dragovic, 2014).
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33 ***3.4 Teaching and assessment***

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35 Besides the five dimensions mentioned, studies focusing on teaching offer a
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37 variety of perspectives: teacher's role in guiding and accompanying the creative process
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39 (e.g., Menard, 2015); teachers' own capacity to compose (e.g., Blom, 2003) and
40
41 teachers' attitudes and beliefs towards creative music making (Kokotsaki, 2011;
42
43 Langley, 2018). Tobias (2013) widens the perspective by drawing attention to the
44
45 development of students' agency as contemporary musicians, performers, and sound
46
47 engineers. As established by Kokotsaki (2011), creativity "would emerge on an intuitive
48
49 level as a by-product of a learning objective rather than being explicitly considered in
50
51 the planning process" (ibid., p. 108). Difficulties around the nature of creativity, musical
52
53 understanding and skills versus fostering more generic life and social skills are pointed
54
55 out by Crow (2008). Teachers' knowledge about creativity is considered as important.
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3 Explicit discussion of what teachers and children consider to be creative helps improve
4 teachers' ability to teach creative music making (Kokotsaki & Newton, 2015).
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8 Teachers' strategies to facilitate children's composing are identified by several
9 authors. Hogg (1994) underlines three roles of music (as knowledge, as accomplishment
10 and as an empowering agent) whereas Blom's model (2003) distinguishes teacher
11 profiles as "expanders" versus "pastiche teachers" by putting forward the role of the
12 musical product. The comparison between a teacher-directed mode versus allowing
13 freedom and space for students puts classroom interaction in the centre (Leung, 2004).
14 The capacity to guide group activities is recognized as a difficulty as are students'
15 musical levels (Agustyniak, 2014) and time spent off-task (Hopkins, 2015). As a result,
16 productivity is not constant in each session, but comparatively high in the last session
17 (Hopkins, 2015; Lage-Gómez & Cremades-Andreu, 2020). According to Odam (2000),
18 too many teachers use methods inappropriate to the resources available to them. There
19 are problems around the progression and preservation of pupils' work. Moreover, the
20 difference between teaching creatively and teaching for creativity seems to be pertinent
21 according to Crow (2008). The author argues "that more acknowledgement of the kinds
22 of creativity capable of being expressed in the classroom would improve the self-image
23 of music teachers" (p. 383). This aspect is corroborated by teachers' lack of confidence
24 in their own musical and pedagogical skills (Langley, 2018).
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46 Literature emphasizes the importance of teacher training programs (Menard,
47 2015) with different levels of guidance depending on students' levels (Hopkins, 2015),
48 and on a high level of professional knowledge and skill required during teacher training
49 (Thorpe, 2017).
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55 Assessment is mostly directed on the process. Only a few studies explicitly look
56 at product assessment (Pilsbury & Alston, 1996) or at the assessment board criteria, for
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3 example in key stage 4 in the UK (Savage & Fautley, 2011). Research on teachers'
4 perceptions shows the importance of characteristics in a student's composition such as
5 representing stimulus ideas or imaginative use of musical elements and devices
6 (Kokotsaki & Newton, 2015). Thorpe (2017) identifies difficulties in assessing
7 compositional processes with peers and with teachers. This perspective is congruent
8 with the correlation between students' and teachers' perception of quality in
9 composition performances identified by Fowler (2014). The importance of ongoing
10 feedback and communication between teachers and students is underlined (Leung,
11 2004). In the same sense, the role of talk in formative assessment and assessment for
12 learning is identified from dialogic theory (Major, 2008)

26 **4. Discussion**

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28 The literature review presented reveals research trends over the last three decades. In
29 the previous section, we presented the results by using the five dimensions of analysis
30 connected to creativity research (process, product, person/group, domain, and context).
31 In this section, according to our three research questions, trends of research (RQ1), the
32 conceptual understanding of creativity (RQ2) and perspectives for teaching for
33 creativity in secondary music education (RQ3) will be discussed.
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42 Creativity has remained a desirable competence in the school environment. The
43 publication of articles from 1990 to 2004 shows a significant upward trend. This would
44 correspond to the exponential growth described in the literature as the second wave of
45 creativity in education (Craft, 2005), developed in parallel with the emphasis on
46 creativity in secondary music curricula. The slightly downwards trend observed
47 between 2004 and 2020 might correspond to the significant global reduction in arts in
48 education curricula (Aróstegui, 2016). A significant proportion of the articles comes
49 from doctoral studies and diverse forms of practitioner research. Most studies' methods
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3 are qualitative, consider the student as the subject and focus on the learning processes.
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5 In this sense, the four main topics of research identified by Odena (2018)
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7 (developmental studies on the creative person, cognitive studies about the creative
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9 process, confluence studies about the environmental context to converge and assessment
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11 studies) can be partly confirmed.
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15 Research focusing on context and creative processes has been promoted during
16
17 the last two decades, mainly through publications by Pamela Burnard and Martin
18
19 Fautley. A shift from studies about the creative person to more collective and socio-
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21 cultural approaches has been observed, as shown by the predominance of group
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23 activities and analysis in the classroom. During the last two decades, creative processes
24
25 in music education have been investigated through various models emphasizing its
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27 linearity (e.g., Fautley, 2005a) versus its cyclical character (e.g., Burnard & Younker,
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29 2002). In line with the confluence theory of creativity, the second decade of the 21st
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31 century has seen further exploration of the influence of conative aspects and learning
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33 environments rather than studies on creative thinking abilities of individuals.
34
35 Increasingly, the role of material conditions has been observed, especially considering
36
37 the use of digital technologies. Studies on this topic point out both the potential and
38
39 some obstacles to using these tools for music creation. These could be linked to
40
41 reflections on affordance and creativity in specific socio-cultural contexts (Corazza &
42
43 Glăveanu, 2020). The use of technology has been in discussion for more than 20 years
44
45 now. Currently, its prevalent use for creative activities in schools is critically discussed
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47 (Devaney, 2019).
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54 We argue that creativity is increasingly considered as a sociocultural and
55
56 distributed phenomenon in line with a paradigm shift in educational sciences (Glăveanu,
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58 2018). However, a dichotomy has been observed between individual approaches,
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3 focusing on psychological aspects of convergent and divergent thinking (Webster,
4 2016) versus approaches to creativity as a social practice through various forms
5
6 (Burnard, 2012). The definition of creativity as a form of imagination (e.g., Odena &
7
8 Welch, 2009; Hargreaves, Miell & McDonald, 2012) can be interpreted as an
9
10 integrative perspective of artistic creativity (Glăveanu, 2019) and everyday creativity
11
12 (Craft, 2005). This specific angle to approaching creativity in an educational context
13
14 might be widened through the concept of creative action (Glăveanu & Beghetto, 2021),
15
16 including psychological, behavioural and sociocultural aspects.
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22 The predominant place of activities linked traditionally to composing and
23
24 improvising can be interpreted as the valuing of artistic creativity and practice. The
25
26 number of articles on musical composition increases during the 1990s and 2000s,
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28 although decreases during the 2010s. The presence of improvisation is rather limited, in
29
30 line with Larsson & Georgii-Hemming (2019) and Siljamäki & Kanellopoulos (2020).
31
32 In our view, this result can be linked to the 19th century and Western conceptualization
33
34 of artistic creativity (Burnard, 2012; Glăveanu, 2019) which highlights the intrinsic
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36 connection between composition and music creation versus improvisation, which is
37
38 sometimes seen as a first step to composition or as another way to develop musical
39
40 creativity. Music listening (e.g., Kratus, 2017), as well as performance and appraisal
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42 (e.g., Odena, 2018) have been mostly considered as a part of the creative process but not
43
44 as creative activities in themselves. In relation to musical style, contradictions can be
45
46 established between the approach to artistic creativity from a historical perspective, and
47
48 thus implicitly internalized, and other musical styles such as folklore or avant-garde
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50 styles of the 20th century. New forms of musical creativities in the classroom, as
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52 pointed out by Burnard (2012), are not clearly defined and observed in most of the
53
54 studies. In this line, emphasising concrete and varied pedagogical approaches would
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3 open new perspectives in the secondary music classroom, such as songwriting and
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5 technologies (Kratus, 2016).
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7
8 The value of creative activities in music education is widely recognized and
9
10 promoted in the curricula of numerous countries. The lack of preparedness, the need for
11
12 conceptual understanding of creativity (Crow, 2008; Odena, Plumeridge & Welch,
13
14 2005; Kokotsaki, 2011; Kokotsaki & Newton, 2015) and the need for experience as
15
16 musicians/composers and teachers (Odena & Welch, 2007, 2009; Leung, 2004) is
17
18 underlined. The epistemological differences may be interpreted as the result of blurred
19
20 goals and theoretical understanding of creativity in music education. In this line, Crow
21
22 (2008) underlines the importance of clarifying the link with music learning.
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26 Since creativity is an imperative in the postmodern world (Sachsse, 2020), there
27
28 is a danger that teachers will advocate for it by any means. In order to not just follow a
29
30 trend, critical reflection on creativity as an educational goal is needed. Therefore, the
31
32 acceptance of what creativity is in music education should not only be widened, but also
33
34 precisely defined, and constructed from existing literature. To summarize, a clear
35
36 conceptual understanding, musical and pedagogical competencies and adequate material
37
38 conditions are recognized as important factors for enhancing musical creativity in the
39
40 classroom.
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44 This review on creativity in secondary music education shows the complexity of
45
46 conceptual understanding and knowledge about creativity related to teaching and
47
48 learning processes. From our look at three decades of research, some perspectives
49
50 concerning future challenges can be outlined.
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54 A stronger focus could be put on interactions between teaching and learning
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56 strategies. Studies on empirical work should provide more concrete information about
57
58 the research context and on procedures for developing appropriate tools for creative
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3 teaching and learning in secondary music education. As the relation between creativity
4 and music production is sometimes unclear, various musical activities involved in
5 musical creativity could be explored. The place of creative listening as well as students'
6 informal musical practice, underrepresented during the last decades, could be fostered.
7
8 According to the challenges of a more complex environment, research could focus on
9
10 inter- and transdisciplinary creative activities. The multiple forms of musical creativities
11 could be investigated in various classroom activities, where analogical and digital forms
12 of music-making coexist. This approach could challenge the traditional distinction
13 between improvising and composing. A more holistic view of creative music activities
14 in human life opens up a field of research on their possible contribution to well-being,
15 to self-growth (Randles, 2020) and to social changes through a large variety of
16 participatory practices. As suggested recently by Randles and Burnard (2022), musical
17 creativities are important elements for preparing citizens to face the uncertainty of a
18 global world, according to the guidelines of Education 2030. For music educators, the
19 challenge remains to define the multiple faces of musical creativities to justify them as
20 goals or initial conditions for learning within the present societal context while keeping
21 a critical distance.
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44

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Figure 1

Flow Diagram

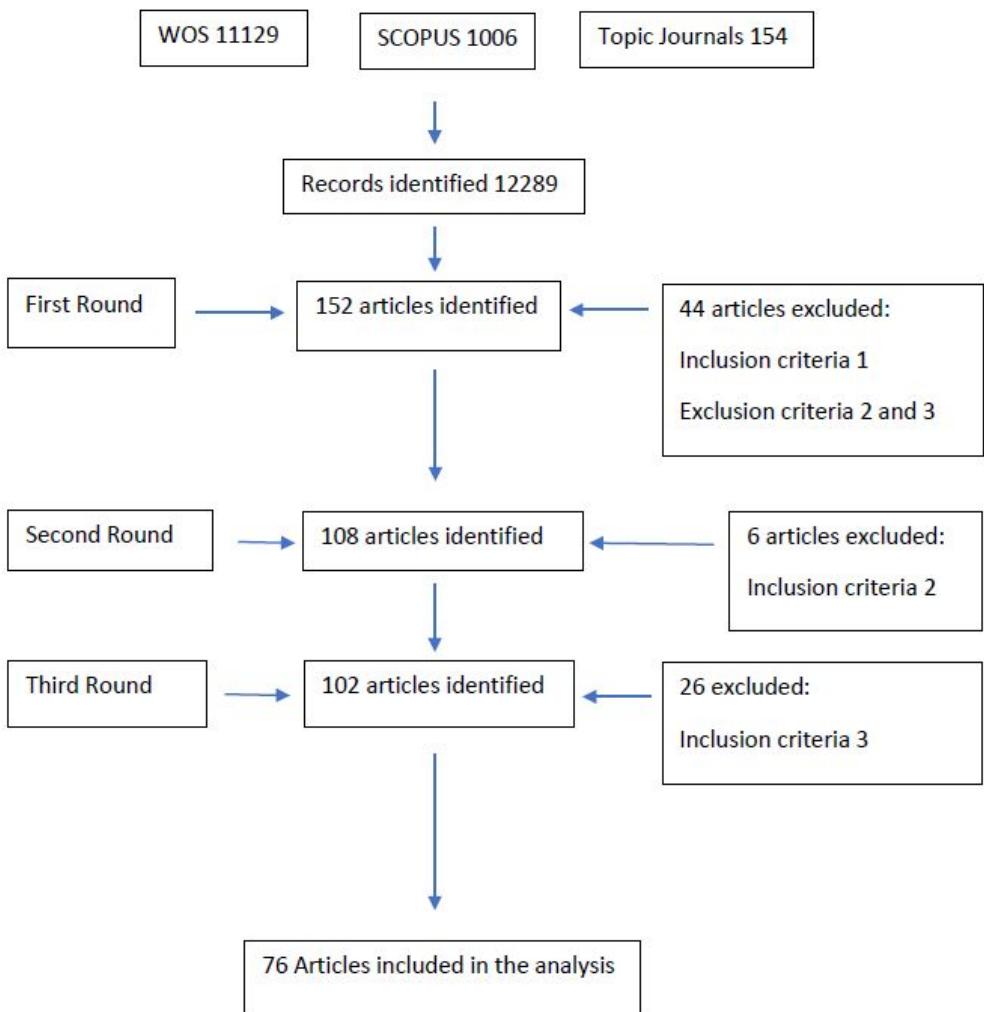


Figure 2

Evolution of the publication of articles on creativity

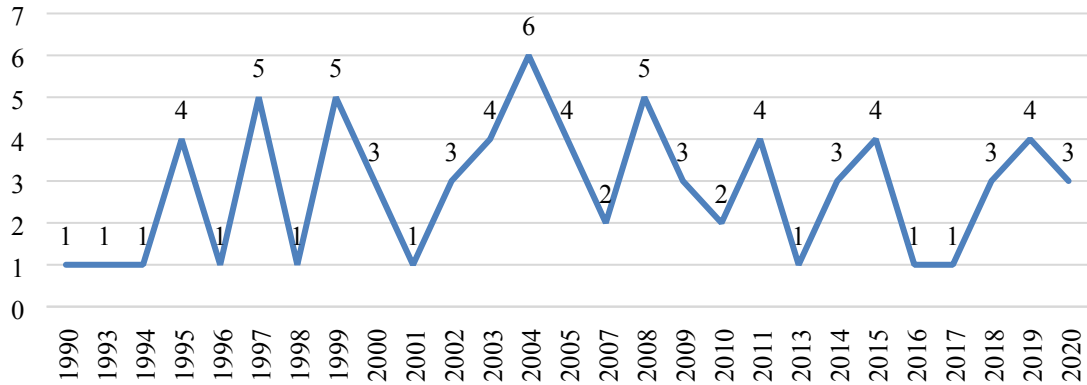


Figure 3

Publishing Authors

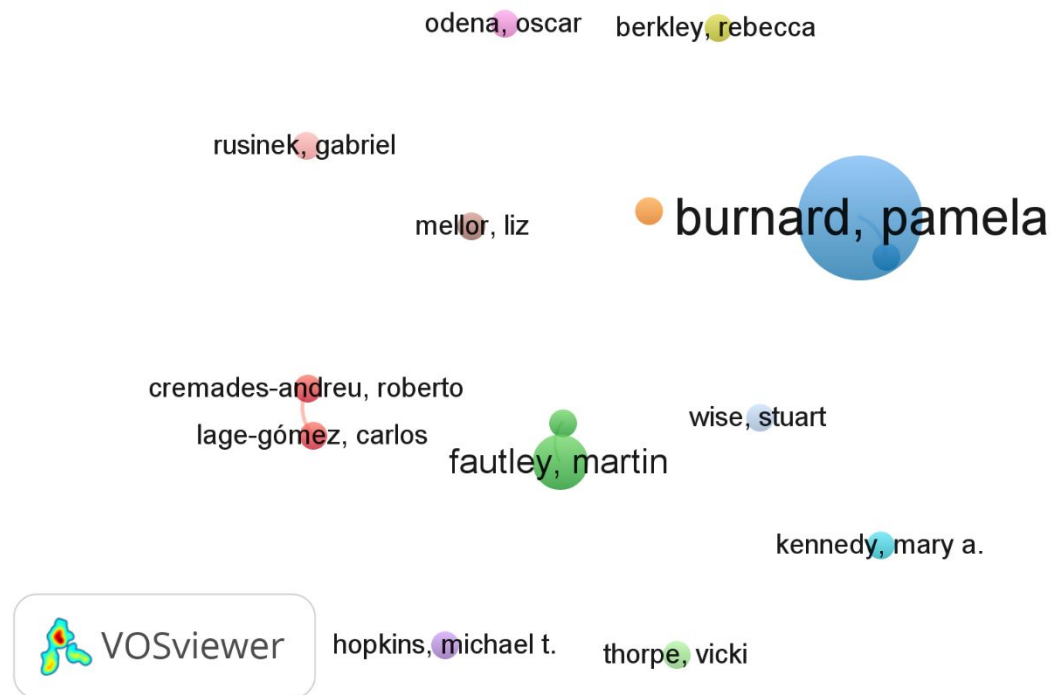


Figure 4

Evolution in Creativity Domains

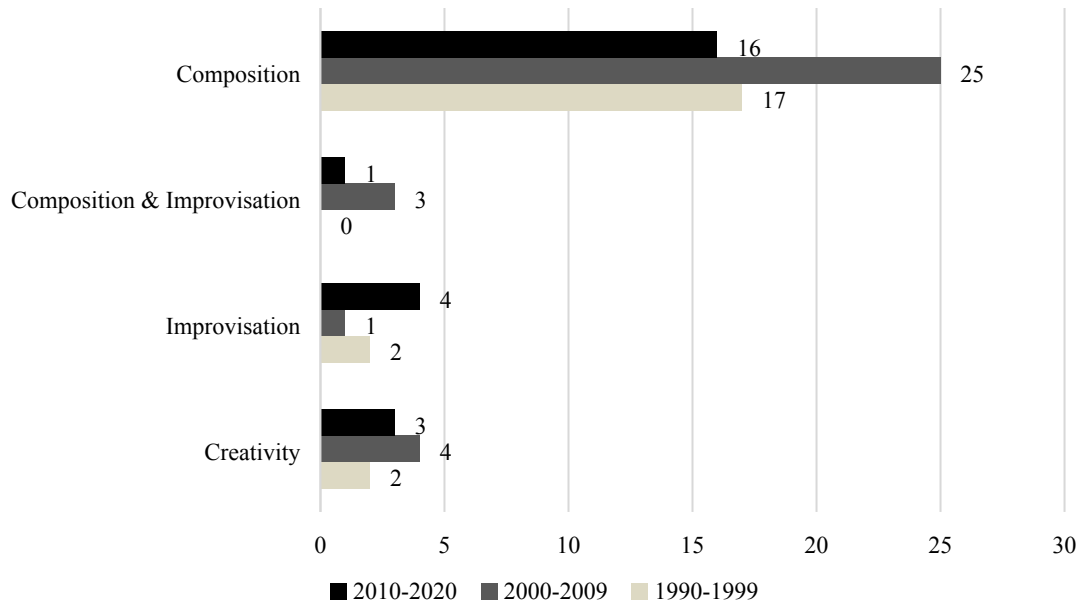


Figure 5

Creativity Taxonomy

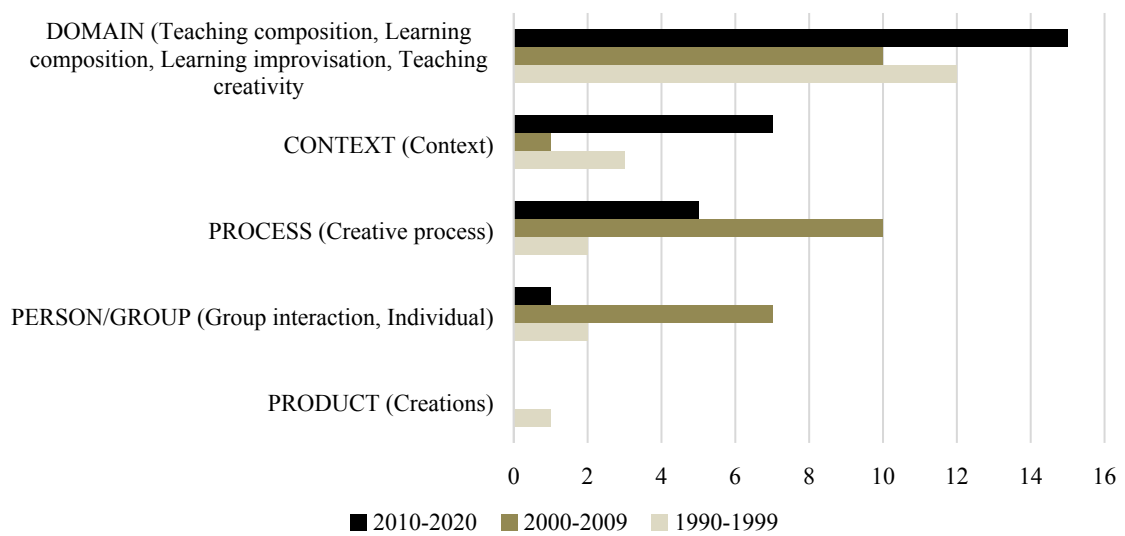
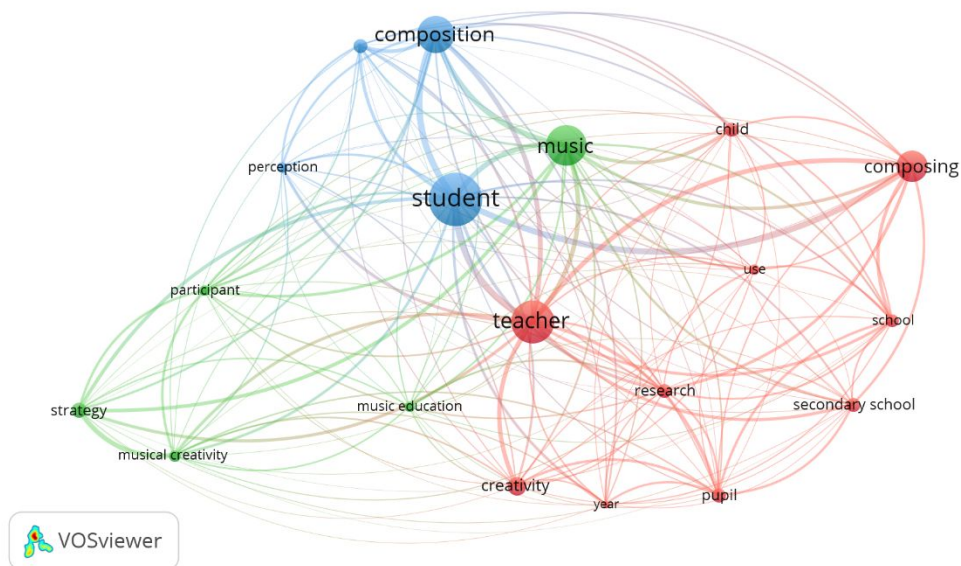


Figure 6

Co-occurrence keywords of the publications



Review

Table 1*Frequencies and Percentages of Learning Strategies According to Topic*

Learning procedure	Domain	Frequency	Percentage
Group		29	38.15%
	Composition	22	75.86%
	Composition/Improvisation	3	10.35%
	Creativity	1	3.44%
	Improvisation	3	10.35%
Individual		16	21.05%
	Composition	12	75.00%
	Composition/Improvisation	1	6.25%
	Creativity	1	6.25%
	Improvisation	2	12.50%
Individual/cooperative		1	1.31%
Not mentioned		29	38.15%

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5 Figure 1. Flow Diagram.
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7 Figure 2. Evolution of the Publication of Articles on Creativity.
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10 Figure 3. Publishing Authors.
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12 Figure 4. Evolution in Creativity Domains.
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14 Figure 5. Creativity Taxonomy.
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17 Figure 6. Co-occurrence Keywords of the Publications.
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19 Table 1. Frequencies and Percentages of Learning Strategies According to Topic.
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