1 *Article*

2 # Sustaining Students' Identities within the Context of
3 # Participatory Culture. Designing, Implementing and
4 # Evaluating an Interactive Learning Activity

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12 **Abstract:** Within the framework of theoretical developments in so-called participatory culture and
13 the context of *funds of identity*, incorporated within what is known as the *funds of knowledge* approach,
14 an innovative teaching methodology is implemented that allows students to actively participate in
15 knowledge construction. The project translates into a proposal for educational contextualization and
16 personalization based on the students' funds of identity, that is, those resources (people, artifacts,
17 places, activities, institutions) they consider to be most relevant and significant to define themselves.
18 Once these have been identified through identity artifacts, such as collages or self-drawings,
19 students link some of these funds of identity to curricular content of the subject and produce a video
20 that shows the results of this academic work. The final product is shared on a YouTube channel
21 containing the videos of all of the students in the class. The phases of the project are described and
22 illustrated. We argue that the proposed teaching and learning project, which is cross-disciplinary in
23 nature, allows for principles such as educational contextualization, funds of identity, and
24 participatory culture to be incorporated into what we call here the funds of identity 2.0 approach,
25 putting it into educational practice.

26 **Keywords:** funds of identity; funds of knowledge; digital media; contextualization; personalized
27 learning; participatory culture; culturally sustaining pedagogy
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29 **1. Introduction**

30   In recent decades, digital media have facilitated the emergence of new ways of creating, sharing
31 and organizing knowledge, often unknown and ignored by schools and the formal contexts of
32 teaching and learning [1-6]. Many of these revolve around *popular youth culture* and take the form of
33 *affiliations* in online communities such as Facebook, *expressions* such as creating videos, multimodal
34 and transmedial forms of writing, *collaborative problem-solving* to complete tasks—including certain
35 collaborative video games—or developing new shared knowledge such as Wikipedia, as well as the
36 *dissemination* of content in a blog, etc. [7-12].
37   Even if from a Vygotskian perspective we can consider that *we are the product of the products we*
38 *produce* [13] (p. 13), what seems to be more relevant with regard to digital devices is not their
39 incorporation into school practice nor the processes known as *E-learning* (learning through the use of
40 digital devices), but rather their general impact on the transformation of society and the human mind
41 [14]. In particular, the qualitative consequences they have in shaping new learning ecologies [1,15,

42 16]; that is, new practices linked to teaching and learning processes (knowledge creation,
43 dissemination and appropriation). In relation to this, the term *participatory culture* refers to new ways
44 in which the "cultural product" or media and the "consumer" or user relate to one another as a result
45 of the emergence of Web 2.0. [11,12]. The result of this is emergent cultural practices characterized by
46 low barriers to learning, artistic expression or civic engagement based on creating and sharing
47 experiences, and appropriating and recirculating media content fueled by peoples' interest [17,18]. In
48 that regard, by participatory culture it means: "a culture in which large numbers of people from all
49 walks of life have the capacity to produce and share media with each other, often responding critically
50 to the products of mass media, and often circulating what they create fluidly across a range of
51 different niche publics" [19] (p. 3).

52   In other words, people are no longer merely observers of what is happening on television, on
53 the computer, on the tablet or on the game console; rather we are able to participate in the production
54 of cultural contents and practices. In fact, more than half of teens and young people have created
55 digital media content (YouTube videos or Wikipedia entries, for example), and a third of Internet
56 users have shared content that they themselves have produced via blogs, Facebook, YouTube, etc.
57 [20]. In many cases, people are actively involved in processes of *cultural participation* (amateur design
58 of a video game, movie, or song, often close in quality to that of a professional production). Thus, the
59 notion of participatory culture can be considered both a description of digital cultures in a hyper-
60 connected society—which revolves around movements and transactions [16]—and a desire or
61 aspiration centered on accessible and public forms of cultural production and [17].

1.1. Funds of identity 2.0

63   The idea of funds of identity emerges within the context of the funds of knowledge approach,
64 which attempts to contextualize the curriculum on the basis of capitalizing (use for pedagogical
65 purposes) on the skills and abilities that all families have, regardless of their economic, social and
66 cultural status [21-23]. In this respect, funds of knowledge are understood as: "Culturally developed
67 and historically accumulated bodies of knowledge, together with essential skills for the functioning
68 and well-being of families and individuals" [24] (p. 47). Broadly, by *contextualization*, *teaching in*
69 *context* or *culturally congruent teaching* is mean: "connecting teaching and curriculum to experiences
70 and skills of students' home and community" [25] (p. 11). In other words, educational
71 contextualization refers to the integration of academic concepts, topics or competences with students'
72 personal, home, and community learning experiences [26].

73   The funds of knowledge approach is an inclusive perspective that seeks to combat the deficit
74 perspective through positive recognition of students' families. Deficit thinking in education arising
75 from an unfounded perception that students of foreign origin, or from minorities, fail at school
76 because of deficiencies in their families – such as a lack of cultural resources, inadequate home
77 socialization, or limited intelligence – which obstruct the students' learning process [27]. Contrary,
78 the funds of knowledge approach maintains that families of foreign origin accumulate particular
79 skills and intellectual expertise that make them unique and valuable. In that regard, it is implicitly
80 assumed that all households possess resources, abilities and bodies of knowledge regardless of their
81 ethnic, economic or linguistic background [21]. The challenge is to link these funds of knowledge
82 creatively with the curriculum and school practice in order to improve learning [28]. This translates
83 into forming a distinct practice community, a study group composed of different teachers and

university researchers [29], as well as ethnographic visits by teachers to the homes of some of their students in order to identify their funds of knowledge and establish ties of mutual trust between the school and the families. Once these skills and knowledge have been identified, they are linked to curricular content using educational innovations based on local knowledge and the previously identified skills of the families [22,30,31]. For example, a natural science teacher in a primary school used one father's occupation in agriculture (i.e., breeding and taking care of animals on a farm) to develop learning objectives such as classifying animals according to what they eat: herbivores, carnivores, omnivores [32].

However, there are certain constraints and limitations to the funds of knowledge approach that can make it difficult to put into practice and reduce its efficacy. Three problems in particular have been identified [30,31,33]: (i) Implementing this approach requires time. Teachers cannot visit all of their students' homes. In any given classroom, only a limited number of the students and their families can be focused on; (ii) There is lack of specific focus on the learner while so much attention is on the families and their knowledge and abilities. Within a single family, there are some discontinuities in the shared funds of knowledge, which means learners might not necessarily share some of the funds of knowledge gained by their parents or significant adults. Moreover, learners, as socially active agents, build and acquire their own funds of knowledge, distinct from those of their families, based on their own experiences, abilities and interests. As these funds build up, it becomes necessary to incorporate them into the equation together with the family funds of knowledge; (iii) Finally, there is a methodological limitation. In short, in order to identify students' funds of knowledge, teachers carry out open interviews in the context of household visits. This means that only qualitative strategies and techniques are used [34].

In order to overcome these limitations, the concept of funds of identity has been [35–37]. This concept places the emphasis on students' interests, practices and experiences through the incorporation of creative works made by the learners themselves—referred to as "identity artifacts" [38]—which then become educational resources to be used by teachers in class in order to personalize learning and connect learning experiences in and out of school [39,40]. In this sense, funds of identity are understood to comprise those people, spaces, things and activities which, for the learners, are the most important and most relevant, and which, ultimately, best define [41]. They may involve significant people, such as partners or family ('social funds of identity'), spaces or places such as a city, a mountain or the sea ('geographical funds of identity'), institutions such as the Catholic Church or the Muslim religion ('institutional funds of identity'), interests and activities ('identity practices') or cultural artifacts such as a flag, a mobile phone or a musical instrument ('cultural funds of identity') [35].

While in the funds of knowledge approach the unit of analysis is family practices, the idea of funds of identity complements this by incorporating the identification of those resources (knowledge, interests, significant people, institutions, practices, places and spaces) perceived as significant by the learner-student [32]. Another key difference is that while funds of knowledge are identified by means of teachers making ethnographic visits to families and talking in depth about work experiences, routines and daily life, linguistic practices, and family literacy; funds of identity are generated by producing artifacts such as drawings, images and videos—tasks that can be used as a resources for establishing connections within curriculum and students' lives [41].

126   Within this proposal, then, funds of identity—which are created and manifested through
127 identity artifacts such as drawings, videos, collages, photographs or graphic representations—
128 become the basis for the educational activity, although they do not represent academic learning
129 processes in their own right. To this end, a connection must be sought and formed with the contents
130 or competences involved in the learning subject: whether this be an author, a topic, a competence, a
131 theory, an intervention program, or any aspect related to the theoretical-methodological-practical
132 body of a particular subject or module.

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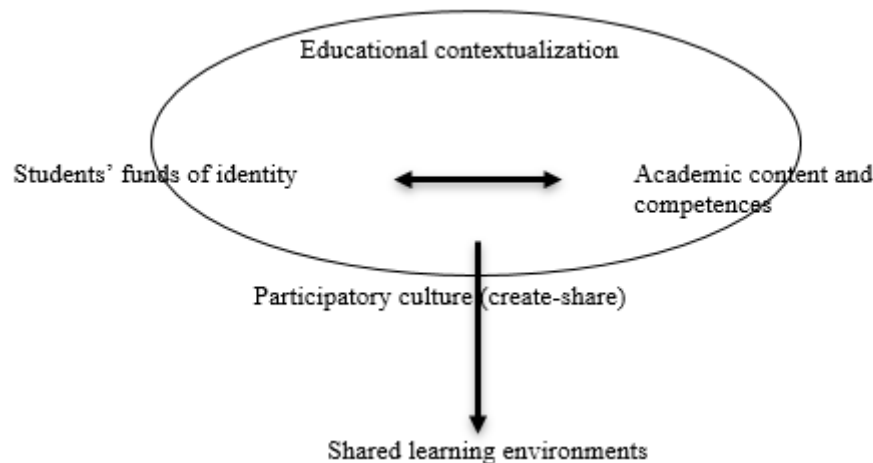
134   **Figure 1**. Theoretical model for funds of identity 2.0.

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136   Recently, it has been used avatars, digital representations of students, and identifying texts to
137 represent-build students' funds of identity and thereby promote learning processes in the context of
138 second languages acquisition [42]. In that context, it has been suggested that the funds of identity
139 represents a development of the funds of knowledge approach and heralds a new phase in the
140 literature regarding this subject, which the author encapsulates under the labels "digital funds of
141 identity" and "funds of knowledge 2.0" [42]. It is in this sense that we adopt the idea of *funds of identity*
142 *2.0* to link it to the scenario of participatory culture described above (see Figure 1).
143   The general aim of this paper is to describe the design, implementation process and evaluation
144 of an academic activity in higher education based on the theoretical approach described above. In
145 particular, it describes the phases, characteristics and outcomes of the interactive learning project
146 based on the funds of identity 2.0 approach within the context of participatory culture.

2. Materials and Methods

2.1. Participants

149   60 university students ranging in age from 20 to 32 years (average age 21.46 years) took part in
150 the study. They were enrolled in the subject Educational Psychology in the third grade of the degree
151 in psychology in the academic year 2017-2018. More specifically, the activity was implemented from
152 February 2018 to May 2018. Of the group, 92% were women (55 participants) and 8.3% were men (5
153 participants). The students voluntarily participated in the project. They signed an informed consent.
154 Only in one case did a student not want to make public the video they had made in the YouTube
155 channel; the other 59 shared their videos in the YouTube channel created to upload the final result of

156   the activity. For reasons of confidentiality, letters are used to identify the participants (for example,
157   LPG).

2.2. Instruments

159   In order to identify/generate the students' funds of identity (to answer the question "What are
160   my funds of identity?"), we employed an adaptation of the *self-portrait drawing* technique developed
161   by [43]. The instructions used were: "Depict—by means of a graph, a map, a drawing, a collage, a
162   photograph, a text, or any other resource or medium—what is most significant or most important to
163   you, what best defines you. It may be people, institutions, objects, activities, hobbies, knowledge,
164   ideas, interests, spaces or places that are relevant to you."

165   To create and share knowledge about a specific content, competence and topic related to the
166   learning subject "Educational Psychology" students created and shared several videos. The
167   instructions used were: "You will make a short video (about 2-5 minutes in length), where you
168   summarize the most significant aspects of the work you have done, and then share it on the YouTube
169   channel "UdG Psicologia - Educació". This video may contain a Power Point presentation, an
170   interview, fieldwork, a mixture of content (texts, photographs), etc. related to a particular author,
171   subject, content, or competence connected to the subject (the author, subject, content, competence
172   selected and linked previously with some of your funds of identity)."

2.3. Procedure

174   Five phases were implemented to connect students' funds of identity and the subject Educational
175   Psychology. Then, the model presented here (see Figure 1) is given practical expression in our
176   proposal for an educational activity developed in five stages. The idea is to apply the notion of
177   participatory culture using students' productions, by linking their identities (interests, significant
178   cultural artifacts, people, institutions, spaces or places, practices or activities) to the contents and
179   competences of the subject or module. These contents may consist of theories or theoretical
180   approaches (the theory of attachment or meaningful learning, for example), key topics (such as
181   technological education or inclusive education), authors (Lev Vygotski or Jerome Bruner, for
182   example). The competences refer to "describe and evaluate different perspectives on the issues or
183   problems they address" or "identify diversity in cultural and social practices", for example (see Table
184   1).

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186   **Table 1.** Phases of the interactive learning project based on the funds of identity 2.0 approach

Phase	Instruction	Period
1st phase: *What are my funds of identity?*	Depict – by means of a graph, map, drawing, collage, photograph, text, or any other resource or medium, what is most significant or most important to you, what best defines you. It may be people, institutions, objects, activities, hobbies, knowledge, ideas, interests, spaces or places that are relevant to you.	1 week

2nd phase: *What content, topic and competence can I relate them to?*	Link any of the elements depicted in the first task to a content, topic or competence included in the subject Educational Psychology. These may be topics, authors, competences or contents that are part of the syllabus. To do this, you must familiarize yourself with the contents and competences included in the subject by consulting the guide or overview, as well as the reference manuals, articles or texts that are recommended within the framework of the subject.	1 month
3rd phase: *What work or research am I going to do?*	Now it is time to develop the chosen content or competence. That is, to look for information and construct knowledge regarding the understanding of "x" as content or the development of "x" as a competence. To do this, you will have to do research work on the subject using reliable resources and funds: bibliography, interviews with experts, fieldwork, etc.	1 month
4th phase: *How am I going to share it and with whom?*	Next, you will make a short video (about 2-5 minutes in length), where you summarize the most significant aspects of the work you have done, and then share it on the YouTube channel "UdG Psicologia-Educació". This video might contain a PowerPoint presentation, an interview, fieldwork, a mixture of content (texts, photographs), etc. related to a particular author, subject, content, or competence connected to the subject (the author, subject, content, competence selected in stage 2).	1 month
5th phase: *How do I evaluate it?*	Finally, describe what you have learned from the project, what you should improve, and how, and then grade your task, from 0 to 2, in accordance with the length and breadth of your learning process, with 2 being the maximum level of acquired learning.	1 week

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3. Results

189 We divide the results into three sections. First, the first phase is illustrated, consisting of the
190 production of identity artifacts to identify students' funds of identity. Second, the topics chosen by
191 students from their identity funds are described (phases 2, 3 and 4). Finally, the learning acquired is
192 described according to the students' self-assessment (phase 5).

193 *3.1. Phase 1. Identity artifacts and funds of identity*

194 In relation to identity artifacts, the variety of resources and formats used stands out, despite the fact
195 that a majority of the students either made a collage (a total of 23 students), or drawings (in 14 of the
196 cases) (see Figures 2 and 3), together representing more than half of the students.
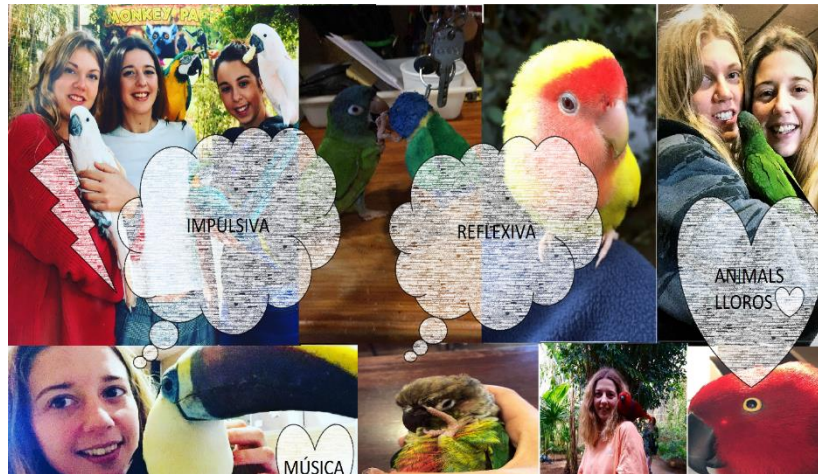
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Figure 2. Example of a collage made by BPM.

210   In the example of the collage shown in Figure 2, words and photographs appear that highlight
211   the most significant elements for BPM. More specifically, these words are: Impulsive, thoughtful,
212   animals (parrots) and music (BPM plays the flute and the guitar) as well as significant people and the
213   activity depicted in the collage: "Finally, in the most privileged place, we find the love of animals,
214   especially of the animals in the bird park where I work, which are a source of great enthusiasm and
215   unconditional support in my daily life. Exotic animals are in fact my main passion." (Explanation of
216   the collage given by BPM).

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Figure 3. Example of an identity drawing made by LPG.

234   LPG, in the explanation of her drawing (see Figure 3), describes herself as passionate about art:
235   "As you can see, the self-portrait has a head full of colorful flowers and plants because I consider it
236   essential to take care of our thoughts, as they ultimately determine our behavior and our lives. On
237   the other hand, you can only see half of the face, because I think that people often see only a part of
238   our personality, but there is another part that is more difficult to discover, even for oneself. You can

239   also see a large ear, representing the importance of listening well to people; active listening and
240   empathy are important to become a good psychologist. Finally, the butterfly symbolizes freedom."
241   Other means and resources used were significant or representative objects of the person (in 6
242   students), the making of a photographic album (also in 6 students), a text or writing (in 4 students),
243   the making of a comic (in 2 students) and, finally, in five other cases other different identity artifacts:
244   self-description through a word cloud, the making of an avatar, a poster, a song and, last a
245   PowerPoint presentation. In the case of objects, it is worth mentioning that two students used a box
246   in which they placed significant elements (see Figure 4 as an example).

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262   **Figure 4**. Example of object as identity artifact (student LPL).
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264   LPL includes, in what he calls "box of significant objects", different photographs (her boyfriend,
265   friends and family), a representation of his dog, as well as representations of his hobbies: cinema,
266   music, traveling, and neurosciences symbolized by a brain (see Figure 4).
267   Regarding the funds of identity identified from the 60 identity artifacts, the importance of funds
268   of social identity is emphasized, in addition to the reference to significant others including family,
269   partner and friends as well as identity practices, hobbies and activities such as sports, music, social
270   networks or video games (see Table 2).
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272   **Table 2.** Typology of funds of identity of participants

Type of funds of identity	Number of times that appears in the 60 identity artifacts
Geographical funds of identity (cities, spaces, countries)	29
Social funds of identity (family, couple, friends)	121
Cultural funds of identity (physical and symbolic artifacts)	33

| Identity practices (hobbies, activities such as music or sports) | 53 |
| Institutional funds of identity (reference to institutions such as the Church) | 36 |

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274   *3.2 Phases 2, 3 and 4. Linking of funds of identity with the subject*

275   During phase 2, described in the procedure section, students connected some of their funds of
276   identity with a topic or content from the subject Educational Psychology. The topics are diverse:
277   family as a developmental context, neuroeducation, coeducation, sports and school performance,
278   Fandom as a learning practice and context, the use of ICT for educational purposes, or intercultural
279   education, among many others (see Figure 5). Basically, the connection either comes from a fund of
280   social identity of participants, or from a significant identity practice, for example a job—either current
281   or the one that the student would like to have in the future. This is the case of BPM (see Figure 2) who
282   says: "As I have represented in my collage, exotic animals, in addition to my work, are my passion,
283   with which I would like to focus on the intervention and reeducation of people with autism using
284   educational activities with animals." In the case of LPL (see Figure 4), the student himself says:
285   "Inside the box, the brain is the most important object, and that is what I will link with the work. I
286   hope my future is connected to neuropsychology. I would like to link education with neuroscience; I
287   have read some articles about neuroeducation and I would like to develop this topic."
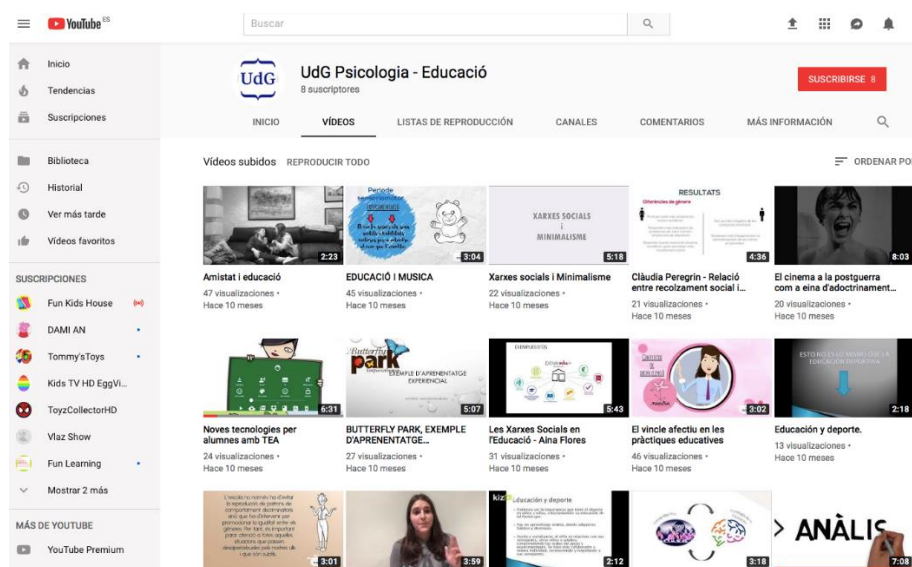
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303   **Figure 5.** Screenshot of the YouTube channel "UdG Psicologia – Educació" accessible via the link:
304   https://www.youtube.com/channel/UCQzuUhsourEYQq29AGmlqqA/videos

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306   In phase 3 the students did the fieldwork, either through interviews with experts, or by
307   reviewing articles and books in the field of educational psychology, based on the previously
308   identified interests. Subsequently, in phase 4, each student made a video with the objective of
309   exposing and developing the topic. The videos were uploaded to the YouTube channel created for
310   the project "UdG Psicologia - Educació" (see Figure 5).

3.3 Phase 5. Self-evaluation and learning obtained

Of the 60 grades proposed by the students themselves, in a self-assessment process, after the development of the activity, an average of 1.7 out of 2 is obtained, which is equivalent to a high average perceived performance of 8.4 out of 10 (B+).

Regarding the specific content of the learning that students say they have done, the mention of academic-type learning stands out, with 61 references. For example, "I have learned to take into account the different factors that influence children's school performance" (APC); "I have learned various things about neuroscience, and in particular the basics of neuroeducation" (IA); "I have learned to distinguish between intercultural education and multicultural education" (SBM). However, they also highlight aspects related to technical procedures of production and distribution of content, with a total of 47 references to this effect. This is the case, for example, of BFN who says, "the realization of the video has allowed me to acquire technological skills related to the edition or use of animation programs". In another example: "I had no idea that you could use programs to present information in an engaging way. In my case I used PowToon; it is a very good resource for preparing presentations" (ABT). Finally, we could highlight another category of learning, linked to attitudinal aspects, learning strategies and, even, linked to the conception of oneself as a learner, with 31 references. For example: "It has been an effort for me in terms of planning and capacity for synthesis, which can help me in other learning tasks and situations" (NBF). According to NCB: "I learned the importance of planning; I usually leave everything for the last minute, and when you make a video you have to first write a script, know what you want to explain, how you are going to divide the information, etc. I think I am now a more competent learner, I would say, at least as regards the management of time and the importance of planning."

4. Discussion

The term *participatory culture* [11,12,17,19] appears as a field of knowledge not strictly linked to the study of how digital devices can improve learning processes, but rather to the analysis of new cultural forms of media convergence, production and participation, as well as forms of social organization and social change [4]. These subjects appear in informal spheres and can teach us how learning can be improved both inside and outside formal contexts, as well as in the transformation of society in general [14].

The application of these emerging cultures of creating and distributing knowledge means offering students opportunities to create and share academic and cultural products that will connect with their passions, interests, competences and prior knowledge—what can be referred to as students' funds of identity [35–37, 44]. Through the creation of identity artifacts [38], the idea of funds of knowledge and identity allows us to give practical expression to the concept of participatory culture with pedagogical purposes.

It is within this framework that we implemented a project which contextualizes the contents and competences involved in university subjects via the creation and dissemination of videos based on the link between funds of identity and the learning subject. The proposed model can be used in any subject, as it is flexible with regard to subject matter. That is, it is a methodology that can be easily adapted to any field of university study, and even other contexts, because it is the students themselves who link their funds of identity with one of the topics, authors, or contents of the subject. However, it has the disadvantage that the chosen concept or topic is studied in depth, leaving other

aspects of the curriculum to be covered. It is therefore recommended to complement this methodology—closer to processes of personalization of learning in which the learner takes a leading role and responsibility in the processes of choosing and linking their interests and needs with the contents and curricular themes [45]—with others that enable us to expand the learning of content, competences and authors associated with a particular university subject.

It is necessary, however, to implement the concept of funds of identity 2.0 in order to determine both its potential and its disadvantages or limitations when it comes to generating learning processes. In this respect, future studies are required that document other experiences related to the methodology proposed here. Some of the issues are: What advantages are derived from the proposal presented here? What are its limitations? What improvements can be made? Does the proposed approach allow learning experiences to be connected inside and outside the formal contexts of teaching and learning? In short: How does the idea of funds of identity 2.0, and the associated methodology, contribute to teaching and learning processes in formal educational contexts? To resolve these issues, it is necessary to first design activities such as those proposed here and then evaluate their impact. The results obtained in this study allow us to suggest that learning is obtained on at least two levels: theoretical-academic and procedural, either in competency in the creation and presentation of content through digital media, or the development of learning strategies. However, the impact on student motivation and involvement, which we consider positive, as well as the potential long-term impact, has not been explored, for which longitudinal studies would be required to document, more a posteriori, the learning that students claim they have done; as well as the incorporation of other measures and sources to evaluate them, beyond the vision of the learners themselves, which is considered a limitation of the study presented here.

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