Article

Analysis of Courses and Teacher Training Programs on Playful Methodology in Andalusia (Spain)

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Abstract: In this study we analyzed the primary teaching and training experiences that observe play as a didactic resource to facilitate learning, highlighting fundamental elements and characteristics. A descriptive analysis of the different programs and contents with respect to playful methodology proposed by the Ministry of Education of Andalusian Government (Spain) is presented. The purpose of this type of descriptive idiographic research is to define, classify, catalogue, or characterize the experiences of innovation and projects on ludic methodology. The results show a total of 217 experiences and programs that deal with the use of playful methodology in the classroom. The results conclude that there are training resources interested and involved in the training of teachers in relation to play as a didactic resource. This type of training is carried out outside the university environment and has the characteristics of permanent training.

Keywords: teacher training; educational game; active methodologies; playful methodology; training programs

1. Introduction

Today, the role of teachers is not only to "teach" knowledge that will have a limited duration and may always be accessible by other means, but rather to help students "learn to learn" autonomously [1].

In order to carry out good teacher training, specific teaching tools must be used to make the training complete and effective. Currently, resources are revolutionizing educational practice, requiring teachers to identify factors and establish criteria for incorporating quality teaching strategies in their classroom practice [2].

During the late 20th and early 21st centuries, creativity has played a strong role in education [3]. Some authors, such as Ferrari et al. [4] and Sawyer [5], among others, believe that it should be explicitly included as an educational objective. However, creativity still does not play a central role neither in the curriculum nor in the educational objectives with which teachers must comply [3].

Teaching in a creative way means adopting approaches that empower the imagination to make learning more interesting, exciting and effective [6]. According to Assmann [7], the training and learning revolution is not, although some people may consider it so, training through the Internet, although it does become important. The real change in learning is the union of learning and fun. This union will make the teaching–learning process more enjoyable and attractive, as well as much more effective [8].

Game-based learning is a way to encourage creative teaching. Indeed, games offer experiences that promote intrinsic satisfaction and provide opportunities for authentic learning [9-11].

Games are a medium in which students can be competent, autonomous, take risks without serious consequences, and develop cognitive flexibility in relation to complex ideas [12]. Martin et al. [13] argued that games are ideal for learning because they present a challenge, represent fantasy, and generate a curiosity during play. Thus, games present an opportunity to use students' interests to educate them.

Throughout the history of Spanish education, highlighting the importance of play as the basis of all education has been a constant [14]. Many educators have made explicit mention of the transcendence of game for educational action.

In the last third of the nineteenth century, one of the first to refer to this idea was Pedro de Alcántara García, who, with regard to the most appropriate methods for kindergartens, identified movement, games, and work as the first and natural manifestations of the child's activity [15]. These are the elements that must be used to stimulate, discipline, and support this activity, and the procedures of any rational method of education must be based on them. García was even more explicit, considering game a great element of education; this method is based to a large extent on the purpose of entertaining and at the same time directing the child pleasantly by educating it through playful activities. His commitment to this activity and the need to consider it in all pedagogy and educational methods is evident, since he clearly manifested how justified is the importance we attribute to game as an educational tool [16].

Thus, playful activity contributes greatly to psychomotor maturation, enhances cognitive activity, facilitates emotional development, and is a fundamental vehicle for the socialization of children [17]. Therefore, games become one of the most powerful means for children to learn new skills and concepts through their own experience [18].

However, the need to implement playful activity at school does not come only from the area of physical education, but, as an ideal example of integral activity that favors other learning, it goes beyond that [15]. The schools of Fröebel, Montessori, Decroly, Claparède, and others have demonstrated throughout Europe the educational capabilities of play. Thus, the applications of these games to the education of the senses and to learning subjects such as reading and writing, geometry and arithmetic, or social education with excellent results, are gradually convincing those teachers who are committed to the innovation of pedagogical practices and believe in the educational possibilities of game as a first-rate educational element [19].

Although very slowly, in a minority of schools or reduced to specific experiences while going more deeply into the theoretical discourse than the practical one, we see how schools welcome playful activity as an educational strategy [15]. At first, the use of this methodology as it stands is scarce. It is always used in subjects such as physical education. There are certain educators who are absolutely convinced of the methodology's pedagogical power and the initiatives (most of them in Catalonia, as a result of the "Renaixença" movement, "Noucentisme", and the contact with foreign currents of pedagogical renovation) are extended to all other educational areas [19]. Although each of the different educational environments (physical or corporal, intellectual or cognitive, civic or social, creative or aesthetic) promote the recommendation or implantation of these activities, they always end up considering the integrality and benefits of the playful activity in all its aspects [17].

Having explained the virtues and benefits of games for education and consequently for the professional development of teachers, we must emphasize the value of this work beyond the autonomous community in which it is focused for several reasons. The results are relevant for the professional development of teaching in general, since they show the importance of play as an educational resource, their benefits, and their implementation facilities. Additionally, on the other hand, these results are a guide and orientation as good practices for educational managers, since the way to access information and didactic training can be valued as a training resource that can serve as a replica or inspiration.

Considering the different researches that carry out different reflections and analyses of the training programs, our work goes further and focuses on teacher training in the use of active and playful methodologies. As we have previously justified, we can draw the following conclusions: there are many studies that deal with the value of university and permanent training programs, but there

is no evidence of previous studies that deal with our subject of interest. This is the main contribution and objective that the authors make to the scientific field: the study of the programs of permanent formation with respect to the use of active methodologies where play as a didactic resource are present. Therefore, our research objective is to "Analyze teaching and training experiences that observe play as a didactic resource to facilitate learning, while highlighting fundamental elements and characteristics".

2. Current Training of Primary Education Teachers in Andalusia (Spain)

Teachers are the pillar of quality education and their training must correspond to social demands and needs [20]. For this reason, the profile of the teacher must be that of a trained person; one who combines specific and didactic knowledge; who is capable of using tools to transform this knowledge into learning elements; who has a social conscience to educate critical people in democratic values; who knows how to unite the environment as an active part of the educational context and who, in turn, has an affective capacity [21]. The quality of our educational system is directly related to the initial and permanent training of the teaching groups that carry out their functions in it [22]. From the last educational reforms (Organic Law on the General Organisation of the Spanish Education System (LOGSE), Organic Law on the Quality of Education (LOCE), Organic Law on Education (LOE), Organic law for the improvement of educational quality (LOMCE), and Andalusian Education Law (LEA) in Andalusia) the conception of Primary education has varied considerably; for this reason it has become necessary that professional teachers have the possibility of acceding to a concrete formation that allows them to confront new challenges and current problems [23]. This means designing training, both initial and permanent, in accordance with the new educational approaches.

Teacher training in Andalusia is a fundamental component in responding to the needs and challenges that are present in schools every day. It is a key factor for teachers to acquire a series of skills for the development of quality and equity teaching. Therefore, the Andalusian teacher training system is a tool that teachers have at their disposal to meet their needs and interests.

Since the LEA [24], the need to train our teachers and the level of involvement to do so has been stated, with the aim of educational improvement:

This transformation of the educational system promotes different human and material resources to the permanent formation of the teaching staff and to the educational orientation. Our Autonomous Community has a consolidated training and guidance network that is constantly changing to adapt to the needs that, at any given time, the schools, the students, the teachers and the educational community have demanded (p. 2).

In addition, Article 18, Section 3, of the Act specifies a specific paragraph to deal with the initial teacher training. It states that:

1. Initial teacher training will be adjusted to the degree and qualification needs required by the general organization of the education system and will be regulated in accordance with the provisions of Article 100 of Organic Law 2/2006, of 3 May, and what is established in the corresponding development regulations. 2. Initial teacher training will cover both the acquisition of knowledge and the development of skills and abilities. The essential component will be the permanent and interactive relationship between theory and practice and the preparation for the management of the teaching and learning processes and the personal development of the students, and its final objective will be to prepare the teaching staff to respond to the challenges of the educational system that are included in this Law. 3. The competent Regional Ministry of Education will sign the corresponding agreements with the universities to organize the initial training of the teaching staff. 4. The practical phase of initial teacher training will be carried out in teaching centers previously accredited for this purpose by the Education Administration, in accordance with what is determined (p.13)

On the other hand, as has already been mentioned, in recent years there have been continuous curricular changes that make it difficult for teachers to adapt to them with the initial training received. For this reason, it is necessary for teachers to be trained in the new curricular model and to offer adequate tools so that they can face the reality of an educational classroom [20,23,25]. Such training addresses a wide range of professional issues: it facilitates the strategies needed to improve professional practices. As mentioned by Baztán Quemada [26], this whole process is more interesting if it is given to all the teachers in the same school. The aim of the training is to achieve greater reflection on teaching practice, in addition to supporting the task of teaching students to achieve high learning achievements and competencies, and to promote, inform and guide teachers on models, methods, strategies and activities to facilitate and manage the learning processes of their students [25].

2.1. Teacher Training Programs for Primary Education

With the arrival of the grades promoted by the EHEA (European Higher Education Area), the training of Primary Education teachers has been transformed. Some of the goals/purposes it pursues are [27]:

- Restructuring of the education system according to three levels: a first level, which would provide a degree that qualifies for access to the labor market; a second level aimed at obtaining a master's degree; a third level aimed at obtaining a doctoral degree, where the second and third levels would guarantee training with a greater degree of specialization.
- Establish a common system of credits to guarantee the achievement of a degree where all students make the same effort.
- To implement a European Diploma Supplement that accurately describes the skills acquired by the student during his or her studies. To promote the adoption of an equivalent and comparable system of higher degrees, in order to facilitate the same work opportunities for all graduates.
- To promote the mobility of students and teachers within the EHEA.
- To promote European cooperation to guarantee the quality of higher studies according to comparable criteria.

The proposal made by the National Agency for Quality Assessment and Accreditation [28] for the design of degree courses in Primary Education had the following characteristics:

A Degree in Primary Education Teaching (240 ECTS credits) is proposed, which should provide graduates with general teaching skills to help development, tutor learning and promote the achievement of the objectives established by the Education System for Primary Education. The teacher must be capable of being responsible for all the common subjects that are currently the responsibility of the tutors (Mathematics, Language, Science-Geography and History [or Knowledge of the Environment] and Arts [plastic]). It also has specific teaching skills in one of these areas [...]: Physical Education, Music Education, Foreign Language or Special Educational Needs (p. 219).

The change in the design of competency-based educational processes has produced a change in the teaching–learning model and in the process of evaluating that model. All this has affected the different methodologies [29]. With respect to the teaching staff, they have had to make a modification in the methodologies and the application of new evaluative aspects for the acquisition of these skills. It is understood that it is necessary to strengthen the role of students, since they should no longer focus on the assimilation of knowledge, but rather as promoters of their own learning [30,31]. Students, for their part, have had to modify learning techniques for the transmission of knowledge. Teaching methodologies, as Fernández [32] points out, are one of the components of educational projects. In this sense, the training plan for the Degree in Primary Education includes forty teaching methodologies that each teacher will evaluate in order to choose from them as a teaching activity. Each teacher must choose a methodology to be followed or evaluation criteria. Depending on the

type of methodology selected, teaching will be developed through different levels of teacher and student participation.

On the other hand, the developments of constructivism in pedagogy are involved, so that future teachers are more prepared and better trained [33]. The emphasis is on:

- Research and innovative training: Most programs emphasize research training, which in some cases translates into several research methodology subjects. Some link research training to practice. Most of this training leads to a final project.
- Disciplinary training: Disciplinary training in the following areas is already emerging in all programs.
- Practical training with educational realities to encourage both training and reflection.

The value of teacher training is of great importance because there are different researches that deal with the subject of interest. On the one hand, there is research that analyzes university programs from a university perspective, such as Delgado [34], which analyzes teacher training programs from a university perspective to give a more complete idea of the current state of the university education system. On the other hand, works related to the analysis of programs have been identified, but from different perspectives. Marín et al. [35] carried out an analysis of training programs, but from a social and educational inclusion perspective. They tried to see if these programs promoted inclusive values. Additionally, Navío [36] carried out an exhaustive analysis of the programs, but from the perspective of a trainer of trainers.

3. Methods

This research is carried out through a descriptive and ideographic analysis of the different programs and contents offered by the different entities promoted by the Ministry of Education of the Andalusian Government (Spain) in the field of training in playful methodology. On the one hand, from the perspective of the descriptive analysis, it provides us with a summary of information of the sample data [37,38]. On the other hand, from the ideographic approach, it tries to emphasize depth and understanding, since it tries to investigate specific objects. The aim of this type of research is to define, classify, catalogue or characterize the object of study [39,40].

In this sense, the study of teacher training courses and programs will help us understand if it can really improve their classroom practice and student learning, because through play as a teaching resource significant learning can be reached.

That is why documentary and information processing help collect documents for subsequent analysis and to extract information from data that would otherwise not be obtained [41]. Documents help to collect valuable information and can be recovered over time [42].

In short, the use of this methodology implemented in this case in the analysis of training programs is a very useful strategy in the field of educational research in order to obtain conclusions about other complementary information sources for teacher training, and is necessary for approaching the knowledge and training of education professionals globally.

3.1. Procedure

Within the Ministry of Education of the Andalusian Government, one can find sections: "Students", "Teachers", "Families", "Schools", and "News". Within the section "Teachers" there is a box called "Teacher Training", which offers information on training activities, schools, approvals, virtual classrooms, etc. In our research, we have focused on the section "Teacher Training Centers" (henceforth CEP), and on "training activities".

Additionally, we have focused on the Averroes portal of the Andalusian Government, where one can find the sections dealing with "Innovation-Projects", "Educational Research", "Digital Contents", "Educational Experiences", and "Awards and Competitions". All of them were considered for our research, except for the section on "Awards and competitions", because it did not give us the information we were looking for. The other sections provided information that could be useful for the research. They talk about didactic contents for work in the classroom, lived experiences,

and innovative and research projects that are being carried out in the educational schools. A total of 217 results were obtained that dealt with the subject of study. Table 1 shows the results of the search.

Table 1. Results of informants after their selection.

Sources of information		Total
Ministry of Education of the Andalusian Government		
	CEP (Teacher training centers)	28
	Educational research	3
	Digital contents	83
	Learning experiences	2
	Innovation projects	101
TOTAL		**217**

Own elaboration.

The Andalusian system of permanent teacher training is organized in a network of 32 CEP, which have pedagogical and management autonomy under the terms established in Decree 93/2013. Table 2 shows the centers located in the various provinces.

Table 2. Teacher training centers in Andalusia.

Almería	Granada	Málaga	Córdoba	Sevilla	Cádiz	Huelva	Jaén
Almería	Motril	Vélez-Málaga	Córdoba	Alcalá de Guadaira	Cádiz	Aracena	Úbeda
Cuevas - Olula	Granada	Ronda	Priego-Montilla	Osuna-Écija	Jerez de la Frontera	Bollullos-Valverde	Linares-Andújar
El Ejido	Guadix	Málaga	Peñarroya-Pueblonuevo	Sevilla	Villamartin	Huelva-Isla Cristina	Orcera
	Baza	Marbella-Coín		Castilleja de la Cuesta	Algeciras-La Línea		Jaén
		Antequera		Lebrija			
				Lora del Río			

Source: own elaboration.

In order to carry out the study, several aspects were considered in order to find out the type of training that teachers have with the implementation of these courses. For this purpose, the modality of the course, the field where it is carried out, the main objectives, and the contents were considered.

4. Results

The results are shown below in different sections: (1) CEP (teacher training centers); (2) Educational experiences; (3) Educational research; (4) Innovation and projects; (5) Digital contents.

4.1. CEP

In order to proceed with the search for information, the following keywords were considered: Game, playful, play as a didactic resource, game-based learning, playful methodology, play as a learning tool, and educational gamification. All of these words were introduced in the exploration in each one of the searches so as to know everything related to the formation of the teaching staff in this sense.

4.1.1. Courses Offered by the CEP

Within the category of Courses offered by the CEP, we found 61 training activities that treated play as a didactic resource. From them, we selected only those related to primary education (28), because our study was focused on that stage (Appendix A).
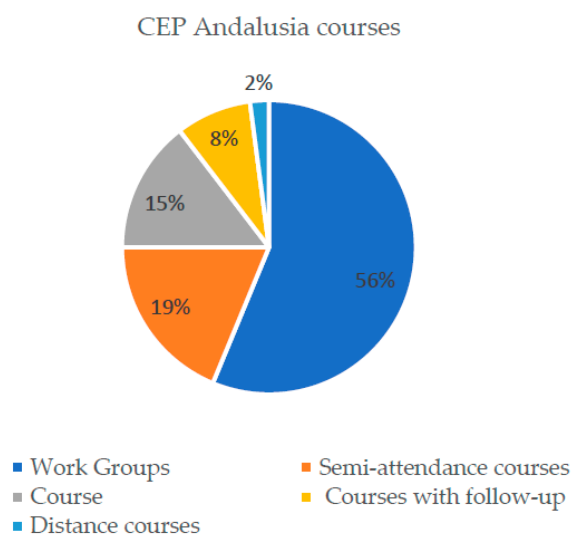
To carry out the analysis, several aspects were taken into account to find out what kind of training teachers get with the development of these courses. In order to obtain information, all the data of the course (title, type of course, workspace, objectives, and contents) and the modality in which they are taught were taken into account. Appendix A shows the detailed information of the training courses in the use of the play as a didactic resource.

The workspaces are the CEP or the school itself. Depending on the type of training offered, it can be general for all teachers and it can be given in the CEP, or it can be more focused, either at the request of a Center's teachers or on demand. The latter option is carried out in the requested center.

With respect to the types of course, there are different modalities that help the teaching staff to carry out each one of them: work groups, semi-attendance courses, courses, distance courses, and courses with follow-up.

- The work groups are made up of all the teachers who make up a cycle or part of a cloister in an infant and/or primary school. The number of members of the working group must be a minimum of 3 and a maximum of 10**.**
- Semi-attendance course: combine certain obligatory attendance classes with others in a telematic way.
- Course: On-site assistance.
- Course with follow-up: Attendance and performance of a series of activities evaluated by the advisor.
- Distance learning course: No Internet learning platform is used to run the course. The training center provides some materials in paper or multimedia format to the students through postal mail. The communications with the teacher are through e-mail, correspondence, or telephone.

Most of the cases are in the form of working groups. This means that teachers in the same cycle are trained in playful methodology and can apply it in their classrooms. In addition, learning becomes more individualized, meaningful and motivating, being able to share these experiences with colleagues from the same center or cycle. Figure 1 shows that 56% of the courses are in the modality of work groups, 19% are semi-attendance courses, 15% are courses, 8% are courses with follow-up and 2% are distance courses.

Figure 1. Courses in CEPs in Andalusia. Source: own elaboration.

4.2. Educational Experiences

In the section on educational experiences, the innovative practices of teachers from different schools are shown. They make them a very powerful resource to be used in different scenarios, as they serve as a model of how they could be developed in a real context.

After the search with the different descriptors mentioned above, two educational experiences about gambling were found.

The first experience (recovery of traditional games) is developed in the primary education stage, in the subject of physical education. The second experience (recess: another organized space for learning) is developed in both the infant and primary education stages, during recess time. Both experiences are from the same educational center, located in a village in the province of Granada. The main objective of these experiences is to improve school coexistence. Among the competences, the following stand out: autonomy and personal initiative, cultural and artistic competence, competence in knowledge and interaction with the physical world, social and citizen competence, and information processing and digital competence. The work objective of the first experience is focused on:

- Developing in children attitudes of responsibility, commitment, and confidence, all of them important for the construction of a personal identity, the reinforcement of self-esteem and a different way of socialization by selecting traditional games.

While the second experience develops:

- Apart from the curricular content offered in the classroom, these spaces are offered and enabled as another framework for influencing the teaching–learning processes. There is a whole range of situations and skills involved in the development of the different activities offered. It makes possible the choice of these according to interests, motivation or character and moods or physical states. The toy library, library, and computer room offer a whole range of possibilities for this.
- Diversifying and proposing these activities during the recreation time means taking advantage of all the available spaces in the center, finding and creating new proposals to educate, and even considering games and leisure as an important content within the curriculum.

4.3. Educational Research

Within the section of educational research investigations that try to identify, diagnose, and obtain conclusions about the educational reality are found, enabling its transformation through the innovation and improvement of daily practices.

After the search, three researches were obtained that approach the topic of the playful methodology from different perspectives:
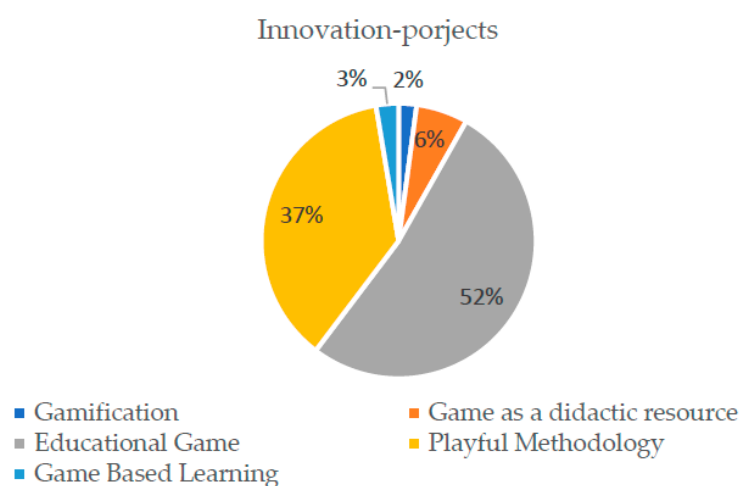
- The gamification in the classroom as a tool for the development of the scientific and linguistic competences in the third cycle of the Primary Education (GIE-025/18): this research seeks to corroborate how the implementation of a gamification system implies the improvement of the competences referred to the linguistic communication of the students, the increase of the motivation of the students towards the learning of subjects belonging to the scientific field, and, finally, how a greater self-awareness is carried out, on the part of the students, and on the usefulness of the scientific method in its application for the true and effective knowledge of the reality that surrounds them.
- Use of game apps with tablets for the subjects of music, English and language. Evaluation of the improvement in motivation, absenteeism and academic results (GIE-034/16): this research aims to: 1. Improve the level of motivation of students; 2. Improve academic results; 3. Reduce the levels of absenteeism from a compensatory center; 4. Create a list of apps for the improvement of the subject that can be installed on all tablets; 5. Create a series of recommendations about how to range a subject and how it helps to improve the educational environment of both that subject and the rest.

- Cooperative learning and its impact on improving the teaching and learning process (PIV-054/18): research is conducted on cooperative learning, as well as the impact on the teaching–learning process. It is based on research into the processes of implementing a specific cooperative learning program through playful methodology. It is based on the self-training and advice of the teaching staff, and its subsequent implementation in the classroom. Strategies will be established to improve the implementation of cooperative learning as a structural methodology of the classroom.

4.4. Innovation Projects

In the innovation section, all the projects associated with the different innovative programs promoted by the Ministry of Education are presented. After searching with the different descriptors (gamification, play as a didactic resource, educational game, playful methodology, game-based learning) a total of 385 innovative projects related to our research have been found. Figure 2 shows the percentage of projects linked to the different descriptors.

Figure 2. Innovation projects. Source: own elaboration.

To carry out the descriptive analysis, only projects belonging to the primary education stage were selected. After this selection, 101 projects related to this educational stage were left. Table 3 shows the number of project before and after the selection.

Table 3. Search by descriptors.

Descriptors	Levels	Primary Education
Gamification	2	1
Play as educational resource	31	7
Educational game	204	54
Playful methodology	131	38
Game-based learning	17	1
TOTAL	385	101

Source: own elaboration.

For this analysis, the innovative scope and programs to which the project belongs have been considered. A total of six innovative programs proposed by the Andalusian Government have been considered. These programs are linked to different areas, which can be covered in different programs. The results are shown in Table 4.

Table 4. Innovative programs of the Andalusian Government.

Innovative Program	Field
School Map of Positive Coexistence	Equality between men and women in education (coeducation)
	Coexistence: promotion of coexistence values, attitudes, skills and habits
	Coexistence: school space and peace
	Coexistence: management and organization
	Coexistence: participation
	Coexistence: palliative interventions for coexistence problems
Teaching–Learning Processes	School planning and organization
Educational Orientation and Attention to Diversity	Design of curricular materials
	Education in values
	Special educational needs
	Training and personal autonomy
Learning and Knowledge Technologies	Information and communication technologies
	Education in values
	School libraries and reading projects
	Attention to diversity
	Teaching–learning processes
	Design of curricular materials
	Educational innovation materials
	Literacy and language
	Coexistence: school space and peace
	Equality between men and women in education (coeducation)
	Research in teaching methodologies
	Teaching and communication in other languages
Reading and School Libraries in Andalusia	School libraries and reading projects
Healthy Living Habits	Literacy and language
	Entrepreneurial culture
	Environmental education
	Health and consumption

Source: own elaboration.

It can be observed that most of the projects that consider game as a learning tool are related to learning and knowledge technologies and to positive coexistence. Other innovative programs such as healthy living habits, teaching–learning processes, and educational guidance are of great interest. It can be observed that there is an interest in play as a propeller of knowledge and that they are used to work on different contents, either for something or in a transversal and interdisciplinary way.

If we focus on the field, three important aspects are of great interest to us for our research, including research in teaching methodologies, educational innovation materials, and design of curricular materials. Some of the projects that focus on these areas are:
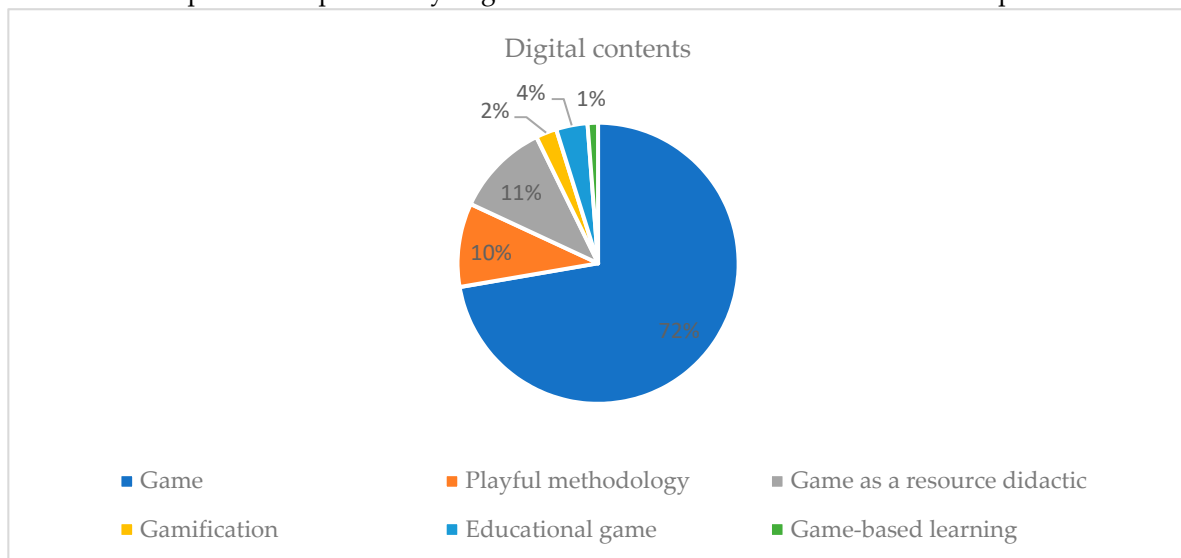
- Squeak, a world to learn: the project aims, using the author's tool Squeak, to improve the learning process of students, encouraging creativity and imagination.
- Resources for logical-mathematical development in pre-school and primary education: the aim is to incorporate and validate in the classroom motivating and playful materials and resources that favor the construction of concepts, understanding, representation, and logical-mathematical

thinking using manipulation and play in schoolchildren from 3 to 7 years of age; that awakens motivation and interest towards learning mathematics. Waste materials are mainly used, following the existing trend in the center of conservation and environmental protection. The following are designed and elaborated for their experimentation, evaluation, and use in the classroom: games in material and computer support; materials to support the work of concepts; and a didactic guide with the description of each resource, its manufacturing process, and its didactic potential.

- The psychomotor and reading and writing through the climbing wall: starting with the great difficulty recognized by teachers of infant and the first cycle of primary school to initiate children in reading and writing and basic psychomotor elements (psychomotor skills), the use of the climbing wall is proposed as a highly motivating instrument capable of generating, enhancing, and stimulating the innate qualities of children to climb and intuition of movement, being one of the best ways to work in a playful way on psychomotor skills and build a global thinking approaching not only the physical-motor aspect, but even the strengthening of initiation to reading and writing content, knowledge of the body schema, and of course attitude.

4.5. Digital Contents

Within the section of digital content, a total of 83 results have been obtained considering the different descriptors used previously. Figure 3 shows the most and least used descriptors.

Figure 3. Digital contents. Source: own elaboration.

The implementation of digital content in classrooms is becoming increasingly visible. It helps teachers to transmit knowledge in a more visual and attractive way, thus improving students' learning. The selected contents offer help and support from different types of resources. They are listed below:

- Multimedia presentation, real or virtual learning scenario, play as a didactic resource, contextualized case;
- Real or virtual learning scenario;
- Play as a didactic resource;
- Thematic or corporate web/portal;
- Voiceover, multimedia presentation, narrative text, real project;
- Information/knowledge analysis/organization service, process/procedure support service;
- Discussion activity, exercise or closed problem;
- Open problem;
- Experiment, simulation;
- Composite audio;

- Self-assessment, digital encyclopedia, multimedia presentation.

5. Discussion

The objective of this study is to analyze teaching and training experiences that observe game as a didactic resource to facilitate learning while highlighting fundamental elements and characteristics. The results show that there are courses and teacher training programs related to the playful methodology offered by the Ministry of Education and from different training areas. The teacher training courses offer the necessary knowledge to practice as an education professional responding to the challenges that arise in the classroom through the use of active methodologies in order to improve the teaching–learning processes. The theory speaks of initial training courses that are taught at the University and that provide basic learning so that future teachers can respond to the various challenges that may be encountered in their professional future [43]. There is also talk of continuing education courses offered by different entities to improve educational processes [35]. These courses provide educational professionals with in-depth tools and content where they can put into practice what they have learned and emphasize the contents learned in the courses offered by the university.

From the point of view of our research, Higueras-Rodríguez [11] talks about the need to have educational experiences about play as an educational resource in different areas, but the results obtained in our research show different courses and programs related to play methodology, including only two educational experiences carried out by the Andalusian Government. That is why teachers must recognize the educational value of playful methodology to improve the teaching–learning processes and to motivate students [14]. Another aspect to highlight is that in the different courses analyzed, various didactic applications through Information and communications technology ICT (e.g., tablets) have been used for student learning. These resources become indispensable for an active and participatory learning. This is contrasted by the research of Jeong Kim and others [44] who mention that the use of tablets in the classroom can enrich the pedagogical quality of activities and promote positive values such as student collaboration and participation.

6. Limitations and Future Works

The main limitation is the scarcity of studies that analyze teacher training in the area of play as a didactic resource, as well as the analysis of training programs offered on the subject from the perspective of public education managers or private training centers. In this sense, another limitation is derived in relation to the territorial scope, focusing our study in a certain geographical area and not in the whole national territory.

Therefore, it would be advisable to continue researching this subject through the different programs and courses offered by different public and private entities at the state level in order to know if they exist and how they are offered. Likewise, we consider it interesting to carry out a comparative study at a European level that will lead us to obtain data not only in relation to the differences, but also in terms of cases of good practices that will serve as a horizon for their implementation in our country.

7. Conclusions and Recommendation

From the different documents analyzed, it was verified that there are training means interested and involved in teacher training regarding play as a didactic resource. It should be noted that these "means" are carried out outside the university with a vision of permanent training.

In relation to other entities, it is concluded that there are companies interested in training in relation to play as a didactic resource and it is a way with a great repertoire of possibilities of easy access for the teacher and for any other professional.

One of the practical implications of this work is the applicability of the results to the educational field in general, beyond the context in which the research is carried out; this is due, on the one hand, to the fact that these results undoubtedly declare the virtues and advantages of the application and use of play as a teaching tool. On the other hand, this type of training analyzed in the study offers

teachers a wide range of options, which can be translated, among others, into easy access and greater availability when it comes to completing and increasing their training. Another aspect, in the specific case of training with respect to play as a didactic resource, is that active teachers have more options for improving this competence, since everything presented in this section refers to ongoing training. Likewise, the results of this work contribute to reducing the stress levels of future and active teachers, since they have the guarantee of seeing their needs and deficits covered thanks to these training means. In this way, they gain confidence and security in their professional development as teachers. Finally, the practical implications of this research are of clear benefit to education managers, as they can use this type of training and information initiatives for their teachers as replicas, improvements or examples of good practice. In short, this is a very important path for teachers, as they must continue to be trained.

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Appendix A

Table A. Training courses in the use of play as a teaching resource.

Title	Objectives	Educational contents
Playful proposals for the French classroom	- Provide for a linguistic immersion of the French language teaching staff - Improve the language skills of the teaching staff in the French language. - Practice the French language in a relaxed and entertaining way in different contexts. - To know different methodological proposals to be applied in the classroom: games, scenes, etc. - To initiate and deepen the creative writing through theoretical and practical workshops. - Enjoy the teaching–learning process of the French language, communicative approach.	- Creative writing workshop - Playful activities to be applied in the classrooms (Primary and ESO) - Playful activities to improve communication and interpretation.
Playful and creative teaching: Gamification, visual thinking and creative use of school spaces	- To know the principles that regulate the methodologies of visual thinking and gamification. - To know the requirements of a school space that promotes creativity. - To put into practice in the classroom the methodologies presented. - To create a space within the school that supports the principles of creativity. - To practice the inclusion of the topics dealt with within the educational program and project. To reflect on one's own teaching practice through self-observation and peer learning.	- Visual Thinking - Gamification

Programming and application of active methodologies in the classroom (Project based learning (ABP), cooperative work, gamification, etc.)	- Establish with the students a system of gamma levels that help to improve learning and motivate them - To know the phases and to carry out some ABP in the classroom. - Use mind maps as a guide and element that helps the self-evaluation and co-evaluation of the students. - Introduce flipped classroom performances with students of Compulsory Secondary Education and third cycle of primary school.	- Active methodologies - Active learning - Gamification - Flipped classroom
Gamification as an alternative	- To promote educational innovation in our center. - To know dynamics, games and motivational applications. - To use alternative methodologies to the traditional ones.	- Gamification - Experiential learning - Motivation
Playing to learn gaming in the classroom	- Discover the benefits of educational gambling in the classroom and learn how to put it into practice. - Understand the concept of gamification. - Understand the difference between game-based learning and gamification. - To play with some of the playful proposals with the greatest educational potential. - To know tools and useful applications for this practice.	- Gamification - PLE gamer - Active learning
The use of board games as didactic material in the classroom of the music conservatory	- Improve grades using the playful component in the subjects of musical language and instrument - Promoting the degree of participation and coexistence in the classroom, using playful games that encourage learning. - To elaborate a didactic material based on the new mechanics of the board games adapted to the specificity of the musical education in the conservatories	Playful games to encourage participation and coexistence in the classroom
Traditional and cooperative games for the inclusion of students with ASD (autism spectrum disorder)	- To promote the educational inclusion of students with special educational needs - Respond to the social and communication needs of students with autism spectrum disorder - Offer adapted material that is useful for the whole school in general. - To give a script to the students to carry out the games in group. - To sensitize to the difficulties of students with autism spectrum disorder. - To promote socialization and communication. - To understand the rules of the game. - To participate with all the students in the game moments in the classroom and in the recess.	Cooperative games bank socialization and communication
Cooperative games	- To develop affective capacities and self-esteem	Cooperative games Coexistence in the classroom

	- Exercise in conflict resolution - Fostering cognitive development	
Board games to improve coexistence	- Improvement of the capacity of concentration, speed of reaction, deduction strategy and social skills for the improvement of coexistence.	Coexistence social skills
Science isn't a game, but... shall we do a trivia?	- Improve the learning of scientific knowledge. - To encourage collaboration between teachers in different areas. - Involve students in the development of classroom materials	Scientific trivia with the following blocks of questions: mathematics, physics, chemistry and scientific culture, for the secondary education levels.
Psychomotor skills through play and expression	- To experience the pleasure of experiencing one's own body consciousness and the richness of its possibilities in relation to the outside world and to others. - To acquire control and dynamic coordination, experiences from the playful, creative and affective relations in a global development in integration. - To dominate the space and the objects that surround it according to his needs and his capacities. - Learn through time, rhythm and movement to relate to the group and to communicate with it. - Access to the capacity of symbolic thinking, maturing and enriching their sensations, emotions and perceptions in a creative autonomy within a group.	Psychomotor skills; play as an educational resource
Gamification and game-based learning in the classroom	- Facilitate active methodologies of rapid applicability in the classroom. - To increase the motivation and participation of teachers and students in the use of recreational resources. - To expose key concepts for the acquisition of knowledge and learning. Topics related to cognitive aspects will be dealt with association techniques, attention, memory and executive functions, emotional and socialization aspects, from the perspective of the field of educational neuropsychology. - To provide key information and resources to get started in game and game-based learning.	- Get to know Kahoot in depth. Learn how to use the application, make materials and apply them to the classroom. - QR, learning to make content related to the curriculum. - Construction of cards, plans and game boards through online applications. - Locks and escape room techniques. - Visual thinking (mind maps). - Construction of a narrative within the classroom, to motivate students. Point system and missions. - Techniques and games for the classroom. Selection of games for children, primary and secondary, for the development of skills.
Math is a game	- Develop an idea of mathematics according to current methodological, pedagogical and mathematical views.	- Development of competences - Funny math - Improving student learning

	- To create materials and situations to develop more logical, practical and real mathematics. - To evolve as people, as teachers, integrating different aspects, understanding different points of view, developing different skills, discovering different capacities. - To improve the daily reality of our students and the rest of the educational community.	
Gamification: "educating with techniques, elements and dynamics of the game"	- Living a gamma process - Teamwork to overcome cooperative challenges involving learning new learning techniques - Discovering and assimilating the basic elements to start an educational process around gamification - Create a prototype application in the classroom - Creating a collaborative learning network around gamification	- Experiences and basics of gamification (distinction of game-based learning) - Integration of other methodologies - Rules and motivation systems—aesthetics: narrative gamification - Components - Escape room - Applications and tools related to gamification - Motivational video creation
Dance and game: a proposal for educational intervention	- To use play and rhythm as a didactic resource and as a point of union between areas, promoting interdisciplinary work. - To live an active methodology based on playful elements as a basis for the development of the curriculum. - To appreciate and use elements of Latin rhythms to improve interpersonal relationships among students.	- Body communication through movement and its importance in dance and rhythmic activities. - Use of forms played for the development of the curriculum - Adaptation of playful activities with a musical base to the teaching of dance. - Coeducation and gender equality in rhythmic work.
Ludification and game-based learning	- Apply active teaching–learning methods, rich in skills and close to a "digital native" student body. - To update our teaching practice. - Encourage students who are usually consumers of video games and of Minecraft. - To introduce students to the basic elements of programming.	- Active teaching–learning - Motivation - Experiential learning
Playing the game of attention to diversity: board games applied to the development of specific programs	- To understand and deepen the concepts of ludification and gamification, their theoretical bases and their methodological applications. - Analyze the existing published materials and make a relation by areas of development of the most outstanding ones. - To specify for several specific areas of development the different materials applicable for the development of specific programs.	- Use of the play as a teaching–learning strategy - Pupils with specific educational support needs

The game as a creative and expressive impulse	- Transmit the importance of a playful and participatory environment in the classroom - To introduce teachers to the resources of play as an element of knowledge and motor development of the student and to the performing arts as a teaching tool. - To communicate the richness of self-expression through play. - Humor and play as the main ingredients. - To use the expressive dynamics as an educational, playful and artistic element. - To contribute to the professional improvement of teachers linked to the quality of teaching and educational success, from an inclusive approach that integrates diversity and offers adequate answers to the needs of all students for their integral development. - To promote the implementation of teaching and learning processes that favor the integral development of students - Promote innovative experiences in teaching–learning processes, based on ICTs, and promote changes in teachers' teaching strategies and in the systems of communication and distribution of learning materials	- Dramatic-expressive tools - Creativity, imagination, play, spontaneity and mental flexibility - Cooperative, traditional, playground, multicultural games, specific games according to the real needs of the students/teachers.
Programming games with Scratch as an educational tool	- Using different programming structures with Scratch - Detect errors in programming. - Store data and use variables. - Use Scratch as an educational tool in various fields such as mathematics. - To promote students' initiative and motivation through programming with Scratch.	- Using Scratch as an educational tool - Math and Scratch—project-based learning - Community learning
Fun learning: practical proposals for gamification	- To know the advantages of gamification as a strategy for learning for all. - To experiment with different gamification tools that can be easily applied to students. To evaluate the possibilities of gambling in order to generate commitment and motivation in the students, working in a cooperative, supportive and non-competitive way.	- Gamification - Digital tools - Escape room
Innovative methodologies in the dynamization of groups: escape room and big games	- To investigate, from one's own practice, methodological playful structures applicable to different learning environments. - To create in a collaborative way proposal of educational dynamization based on games and physical activity. - To experience and analyze the necessary elements in the creation of creative learning environments.	- Escape room - Experiential learning - Creative learning environments

	- To apply educational escape rooms as content and as innovative methodological tools in the learning processes.	
Neurocognitive stimulation through play at CEPR Andalusia	- Integrate the game into the curriculum. - Investigate which games are appropriate for the level of the student body. - Relate educational games to the curriculum. - Develop key competences through play. - Involve families in the teaching process - Learning from a participatory perspective	- Neurogames or educational games in the classroom - Active learning
Popular games in the infant education curriculum.	- Value the importance of popular games at a child's age. - To carry out the proposal of educational intervention, bringing some popular games closer to the infant education classroom, knowing and accepting its rules and regulations. - Developing attitudes of tolerance and respect towards their peers, based on popular play. - To learn values through play and to work through these values, through coeducation.	- Popular games - Coexistence - Attention, tolerance, and respect
Dramatic play, a proposal to educate in equality	- To provide tools and didactic resources to work on equality in the centers. - To identify situations of inequality through dramatic play. - To provide teachers with tools to regulate and promote positive behavior towards equality. - To transmit the importance of a playful and participative atmosphere in the classroom.	- Equalities - Analysis of situations and facts of the personal environment expressing them through a dramatic improvisation scheme: dramatic play makes us equal. - Resources to guide students towards the path of creativity, imagination, play, spontaneity and mental flexibility in their approach and knowledge of equality as objectives.
Video game design in the classroom	- Propose a project (ABP) to your students to create a video game adapted to their curricular area using the Scratch tool. - To follow up on it by means of simple and effective rubrics for its evaluation and development. - To understand the curricular and competence usefulness of the project. - Publish the video game and make it reusable as an educational project for the following promotions.	- Scratch - Publication by project - Classroom game - Active learning
Methodological innovation in the classroom: board and role games applied in the classroom	Analyze, learn and deepen the application of the new board and role games in the classroom	- Table games - Role games - Active learning
Gamification in the primary classroom: play-based learning	- Bringing knowledge of gamma methodologies and game-based learning closer to teachers in a practical way.	- Gaming methodologies - Game based learning

| | - To promote the application of gamification in the classroom as a motivating element that contributes to the improvement of student involvement in the teaching–learning processes.
- To provide teachers with specific game-playing tools for use in the classroom | |
| Content and language integrated learning through activities and games | - Easy acquisition of a language through its contextual, specific, concrete and punctual use, (linguistic objectives)
- Cooperative learning, (pedagogical objectives)
Thematic variation and use of content based on the real world, (socio-cultural and socio-economic objectives) | - Active and cooperative learning
- Play as a teaching resource |

Source: own elaboration

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