

Article

Could Gamification Be a Protective Factor Regarding Early School Leaving? A Life Story

Laura Guerrero-Puerta ^{1,2,*}  and Miguel. A Guerrero ³¹ Department of Education and Social Psychology, Pablo Olavide University, 41704 Seville, Spain² Department of Pedagogy, University of Granada, 18071 Granada, Spain³ Faculty of Education, University of Malaga, 29071 Malaga, Spain; migupu97@gmail.com

* Correspondence: laura.guerrero.puerta@gmail.com

Abstract: The European Union has recognized the close relationship between mental health, well-being, and education, encouraging studies and whole school interventions that work in the interrelationship between mental health and school, especially in aspects related to Early School Leaving (ESL). Literature shows that there are research gaps in this regard, but there are some inklings to think that innovative teaching methods can improve both adolescent's mental health and reduce the rates of ESL. The main objective of this article was to find out how the use of game-based teaching techniques affects the well-being of students at risk of ESL. The life story of one young student that has left school early has been studied, focusing on the impact that gamification had in his scholar trajectory and well-being. Data analysis was carried using the constructivist version of the grounded theory. Results showed a certain degree of interrelation between all three aspects. Pointing that a period of gamification can have a positive effect in school engagement as a result of better levels of wellbeing, but also, that if this methodology is not maintained or accompanied it can cause a rebound effect acting as a risk factor to ESL.



Citation: Guerrero-Puerta, L.; Guerrero, M.A. Could Gamification Be a Protective Factor Regarding Early School Leaving? A Life Story. *Sustainability* **2021**, *13*, 2569. <https://doi.org/10.3390/su13052569>

Academic Editor: Marc A. Rosen

Received: 21 January 2021

Accepted: 22 February 2021

Published: 27 February 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Keywords: gamification; adolescence; game-based learning; early school leaving; dropout; well-being; mental health; life story; grounded theory

1. Introduction

Early school leaving (ESL) is a phenomenon on which the European Union has taken a strong stance since its formation, warning about the need to drastically reduce the rates below 10% in its member states [1] in an attempt to ensure the “professional, social and personal fulfilment of all citizens, employability and sustainable economic prosperity, while promoting democratic values, social cohesion, active citizenship and intercultural dialogue” [2]. This makes early school leaving a pending issue for the education systems of all member countries, especially those, such as Spain, that have rates above 15%, leading to the blacklist of countries with the highest ESL rates [3,4].

ESL is a complex phenomenon with a multifactorial and interrelated origin, where social background, school context, and individual characteristics are influential factors in the process, but where none of them are explanatory by itself [5]. Therefore, there is no “magic recipe” that can reduce these figures. However, if we move away from a simplistic view, in which we identify causes and perpetrators, and strive to find lines of action, the school system is a privileged environment for tackling the multiple challenges posed by early school leaving. To do so, literature shows that it is necessary to foster attachment to the institution [6], to listen to the “voices” of the pupils present in its classrooms [7,8], to meet their needs through less exclusive methodologies [8–10] and to guide them towards a future in which, as Europe demands, they must be able to develop themselves both professionally and socially, regardless of the starting point provided by their context [11], having access to good general and psychological health [12], particularly as the mental

health and well-being of early school leavers is one of the factors receiving more attention in recent times regarding the importance of improvement [1,13].

This article focuses on the need to seek more inclusive methodologies [8–10] to alleviate ESL and improve the well-being of students at risk. To this end, it examines students' perceptions about the use of gamification in a secondary education classroom as a mechanism for combating school leaving. This is a methodology characterized by the use of game mechanisms and structures in non-game environments to engage users, incite action, promote learning and solve problems about a particular subject [14,15].

The use of gamification in education has given room to a growing body of literature over the last decades [16]. Consequently, gamification experiences have been described in different educational stages, from Early Childhood Education to Higher Education [17–19], including Primary Education [20–22], and even Secondary Education [23]. However, as pointed out by Peirats et al. [24], these studies have focused on exploring the process of introducing this methodology in the classroom and have barely enquired into the perceptions and experiences from the students' point of view, with the exception of a few university-based publications [25]. As a result, the use of gamification as a possible protective factor against school leaving has been reduced to a very small number of studies, almost anecdotal [24–26] whose findings have made progress in communicating a beneficial relationship between interactive games and ESL prevention [24], in describing specific designs of interactive games to increase the employability of students at risk of leaving school [26], or explaining concrete activities to prevent school leaving using specific software as a motivational element to work with families in out-of-school periods [25]. This leaves important gaps in the knowledge about gamification and ESL, which include among others the need to approach it from the student's point of view. This could be key in order to advance towards a greater understanding about the specific effects of gamification on students at risk, deepening in mechanisms that can turn this methodology into a protective factor, as well as the possible conditions that may pose a risk or may diminish the effects of this methodology.

This paper builds on the aforementioned research gaps and presents a case study of the life course of a Spanish young man, Hercules, to explore the possible relationships between the use of gamification and school leaving, paying particular attention to students' well-being when they are at risk of dropping out of school. In this way, it sets out to achieve the following objectives:

- O.1: To study the effect of gamification regarding school leaving and adolescence within the life story of Hercules.
- O.2: Establish middle-range theories about the relationship between gamification, school engagement, and adolescent well-being to partially void the gaps existing in literature regarding risk and protective factor related to ESL and adolescent well-being.

Following this introduction, the article briefly discusses the situation of Spain regarding early school leaving, the country of Hercules; the relevance of gamification in education to foster student engagement; and the need of working towards well-being seeking methodologies to combat school leaving. This would create a background in light of the objectives proposed.

2. Background

2.1. The Fight against Early School Leaving in Spain and Policies Aimed at At-Risk Pupils

Early school leaving is one of the greatest challenges faced historically by the Spanish Educational System [4], which is urged with the need to deal with a problem that goes beyond the field of education and also affects the social and economic sphere [27]. As NESSE [28] points out, individuals who leave school early have a high probability of suffering unemployment, accessing precarious jobs, and needing social assistance. This is materialised in Spain through unemployment rates of 19.9% among the population with only a lower secondary education degree, compared to 8.8% of the population with higher education [29], as well as in the estimation of an additional cost in public expenditure for

each student who leaves the education system early, of approximately €230,000, derived from social benefits, health care, and unemployment benefits [28–30].

In recent years, there has been a decrease in the number of ESL in the country, with 23.5% of students failing to obtain the school leaving certificate in 2015, compared to 17.3% in 2019 [29]. However, early school leaving continues to be a key objective on the national and regional political agenda, giving rise to a wide variety of policies to address this challenge [31], which has left the country far behind the 10% target set by the Lisbon agenda.

In general terms, policies aimed at reducing early school leaving in Spain have focused on three areas of action, (1) offering financial aid to families and individuals at risk of leaving school, (2) establishing national plans for educational support and reinforcement beginning at primary education, and (3) establishing specific programmes within the structure of the education system that can offer an environment more oriented to the attention to the diversity of students at risk [32]. In the following, we will focus on the third of those, as the curricular diversification programme that Hercules caters for falls within this category.

Policies to Combat Early School Leaving within the Structure of the Spanish Education System. The Curricular Diversification Programme (PDC)

In Spain, the General Law of Ordination of the Educational System (LOGSE), specific programmes were implemented within Compulsory Secondary Education (ESO), aimed to act as a second chance for pupils with greater difficulties and therefore more likely to leave school before obtaining any qualification. These programmes have been controversial, as, on the one hand, they have been strongly questioned for entailing a process of labelling and expulsion of the least advantaged students from general secondary classrooms, fostering in these individuals an even greater individualisation of their own failure; while on the other hand they have been recognised for the positive results in terms of graduation that they have had [32].

Among those, the PDC, initiated in 1990 and in operation until 2013, stands out for its historical trajectory. This programme was offered within the ESO, with the aim of providing a response to students from second year onwards enabling them to achieve the lower secondary education qualification by completing the programme. To be applicable, those students should have had a history of repetitive grade repetition, be up to 16 years and less than 18.

PDC was a measure of attention to diversity with curricular and organisational actions. Among those actions included the reorganisation of subjects into three curricular areas of a more globalised and integrated nature, which were the linguistic-social area and the scientific-technological area, worked on in the PDC group from an integrated and global perspective; and an optional area in which students could choose specific subjects of secondary education that they could develop with a reference group of the general modality. This reorganisation of school subjects resulted in a reduction in the number of teachers in contact with the group, which was reduced by almost 50% compared to the general modality, and a greater individualisation of the contents dealt in class, which, from a global and meaningful perspective, had to be adapted to the specific needs of the pupils in the group, which in any case should not exceed the number of 15 per group [33].

2.2. The Importance of Methodology to Tackle ESL and the Use of Gamification in the Educational Field

Explanatory models used to explain ESL usually recognize the importance of the individual characteristics of students but have gradually ceased to be centred on deficit models belonging to more traditional approaches. In this way, the role of the school habitus has been questioned, and school engagement has become a central element which has been linked to the school's welfare and dependent on social (in which family origin plays a major role) and historical conditions. Thus, Tedesco's model [34] as part of the cultural variables, Wehlage's model [35] through his critique regarding the immobility of educa-

tional methodologies, and Escudero's multidimensional model [36] through his criticism on the excluding factors arising from the school environment, all refer to the importance of teaching methodology as a protective factor against school abandonment, recognizing its relationship with well-being and the pupil's engagement. However, independently of the model in focus, the literature has made a clear statement defending that combating early school leaving requires concrete, problem-oriented, cooperative and autonomous learning involving whole school interventions [35]. Taking this into account, what could be the advantages of using gamification?

Gamification and ESL

The use of games in the educational field has been highlighted in the literature as a key factor for improving teaching [37–43]. This is as games seem to have a naturally motivating effect on students, who could find a fun way to learn compared to what they previously perceived as a monotonous subject [44]. This has been supported across various psychological theories of learning, which, from sociocultural approaches, has been explained as games being able to help broaden the zones of proximal development both at socioemotional and cognitive levels by leading users to perform above their cognitive capacities and logical thinking in everyday settings. Piagetian constructivism has argued that games are both a reflection of existing cognitive structures and a means to achieve new learning and are consequently attributed as highly relevant to children's development. Nowadays, the literature is increasingly exploring games that take place in or are based on virtual environments. Gamification, through its use of tokens, challenges, and visual settings are part of this group [45].

There is a great number of studies that point out the benefits of gamification on improving both intrinsic and extrinsic motivation [44,46–51]. Several authors point out that this effect seems to be quite immediate, having a substantially positive effect on the initial motivation for the proposed activities [52,53]. In addition, literature reports that this methodology could have a positive effect as it gives participants an active role and relegates the traditional conception of teachers, turning them into facilitators of the learning process [54], propitiates cooperation, could favour a positive climate in the classroom, and provides a much more significant learning [55].

On the contrary, the literature also warns about an increase in competitiveness, frustration, and drop in the quality of materials presented by students, concluding that this methodology seems to have a very limited impact regarding the pupil's grades if we compared it with traditional methodologies [46,56–58]. Nevertheless, some authors have despised those claims, and an example of this can be found in a systematic review on gamification's literature, which showed a positive effect of this methodology in areas where students have learning difficulties and a background of bad experiences, improving the emotional perceptions of the subject [59]. Others have claimed that the adolescent population is familiar with those settings as part of their experience as users of video games, and that therefore the environment offered by gamification, even though there could be different student's profiles in a classroom, acts as an element of fun for and can help them to set and achieve teachers' objectives instead of being a source of stress [60]. Markopoulos et al. [57] argues that there is insufficient solid empirical evidence on the impact of this tool in the educational field, and as a result there is still not a widespread consensus on the matter.

Our main hypothesis is that this boosting in motivation that can be produced by gamification, together with its seemingly speedy effects and its apparent potential to erase bad experiences associated with the educational process, can be fundamental in the prevention of early school leaving, which, as we have seen, can be explained as the result of a process of disengagement from the school environment, characterized by a lack of motivation towards education [35]. It could also have a positive effect on student's wellbeing. Although it is yet to be fully studied, because, as it has been explored in the introduction, there is almost inexistent research on the interrelation of both topics.

2.3. Exploring the Growing Importance of Working on Mental Health and Well-Being in the International Framework and Its Connection with Early School Leaving in the European Context

A recent literature review [61] shows that, even when there is a need for further researching on this topic, there are significant evidences to think of schools as effective environments to promote mental health and well-being. This could be explained because of the amount of time that children and adolescents spend on it, but above all because it is an environment that through learning experiences enables students to build aspects of their identity, establish relationships and develop interpersonal and intrapersonal skills that may help in laying the foundations for good mental health in the future [12]. Yet, it could also be an environment that can be conducive to the development of mental illness associated directly or indirectly with the school environment, with phenomena such as bullying, academic stress or problems related to integration into the school environment that can cause lifelong problems [62–65].

Thus, bodies such as the United Nations Educational, Scientific and Cultural Organization's (UNESCO) or the Organization for Economic Co-operation and Development (OECD) have specifically recognized the role of schools in promoting adolescent mental health and well-being, and have respectively created the "Strategy on Education for Health and Well-Being" and "PISA Framework for the Analysis of Student Well-Being" which focuses its analysis on the general well-being of school children and studies psychological well-being as part of its five main domains, which, as Gorova et al. indicates [65] are: "(1) cognitive well-being, which includes variables related to student knowledge and abilities for resolving everyday issues; (2) psychological well-being, which includes students' perceptions about their lives, their school engagement, and their future plans; (3) physical well-being, which refers to students' health and habits related to sports and eating; (4) social well-being, which evaluates how students perceive their relationships within and outside of school; and (5) material well-being, which refers to the available resources for students' needs [66]".

Not surprisingly, the European Union has recognized the close relationship between mental health, well-being, and education, and has encouraged studies and interventions that involve entire schools in investigating the interrelationship between mental health and school, especially in aspects related to educational attachment, school failure, and early school leaving [12,67]. Simultaneously, it also recognizes that there are still inconsistent information and research gaps in the understanding of risk and protective factors and of effective and efficient interventions in this regard [67].

Since Lisbon's agreement, reducing ESL has been a constant, as a part of the European Union's strategy for achieving a knowledge-based society that grows efficiently and promotes equity among its population, this can be seen in both 2020 and 2010 strategies of European growth, which poses it as a priority objective. However, when we talk about ESL, social logic has not always been followed, and sometimes the objectives have responded to more economic than humanist interests, focusing not so much on the welfare of students, but rather on economic aspects related to employability [68,69]. For that reason, a recent report published by the European Commission "Mental health: Challenges and Possibilities" [67] after the Vilnius conference (2013), and especially the Third Health Program 2013–2020, are of vital importance, as they break with a more economic approach to combating school abandonments and propose a very interesting framework for intervention in the educational field, proposing an intervention based on the development of well-being in the adolescent population.

ESL in the Literature and the Complexity of Linking It to Mental Health and Adolescent Well-Being

As we said before, with the exception of the Third Health Program 2013–2020, the importance of linking psychological well-being and health with school leaving has hardly been carried out or explicitly mentioned in education policies. Some authors, such as Downes [70], state that this is due to a lack of commitment to qualitative research in the field of education, which, linked to the difficulty of studying aspects such as emotions, are

highly dependent on subjective aspects, and there is hardly any literature on the subject. Other authors, such as Limerick [71], go further and point out that there is a certain complexity when it comes to linking health and education without being deterministic, since there is a series of personal, social, and economic factors that mediate and influence educational trajectories, which depend on and are influenced by wider social and economic policies, as well as by specific education and health policies [72]. This makes it complicated to design interventions from the educational area as they depend on other spheres which do not always have the necessary coordination mechanisms.

In a limited way, the initial study on ESL used models focused on deficit theory and the multidimensional models, which are currently being developed, the welfare and mental health of early school leavers has been taken into account in a recurrent way. However, the way in which we understand their relationship has varied considerably [73].

Traditionally, literature has focused on pointing out the causes and consequences of desertion [3]. Hence, causes of ESL related to well-being and psychological health have been identified. Those include an identification of possible psychological and cognitive characteristics of the individual, and general health status as a factor that may lead to abandonment [74]. Similarly, mental health and well-being implications have been identified, with authors such as Liem, Dillon, and Core [75] stating that compared to their high school graduate peers, early school leavers had significantly higher levels of depression at the time of expected graduation. Several studies [76–78] indicate that those who left school early were significantly more likely to have a mood disorder and were at significant risk of suicidal thoughts. In the same vein, a high percentage of authors indicate that those who leave school early are at greater risk of long-term marginalization and social exclusion [79], something that a large group of research [80–82] associate not only with poorer levels of mental health, but also with poorer overall health and shorter life expectancy. Currently, explanatory models of school abandonment have a multidimensional character [36] and acknowledge that life course is cumulative and interactive, and therefore ESL must be explained on the basis of those interactions, avoiding conclusions that point to a wide variety of specific risks without taking into account potential mediating factors, presenting causal relationships that are consequences and vice versa [83].

3. Materials and Methods

This research has been conducted using Charmaz's Constructivist Grounded Theory (GT) [84–88] as a guide for both data collection and analysis with the main objective of creating mid-range hypotheses and theories about the interrelation between ESL, gamification, and well-being.

Grounded theory is a methodology with a long tradition, which has been heavily criticised for its excessive positivism and for rejecting the use of prior knowledge on literature for grounded research [86,88]. For this reason, and taking into account the characteristics of our study, whose starting point is the observation of gaps in the literature and does not attempt to make generalizable claims, we have chosen the constructivist version of this methodology.

Furthermore, we have opted for Charmaz's GT because of its epistemological approach, through which Charmaz situates the role of the researcher as a co-protagonist in the social construction of knowledge. This is, insofar as researchers' perceptions, practices and level of reflexivity intervene in the creation of theories through a dialogical process [85]. This is a departure from early GT theorists who asserted that the role of the researcher was to discover theories and categories existing in reality [86] and whose methods were noted as excessively based on quantitative parameters to allow for the reflexivity needed in qualitative studies [87].

3.1. Study Design and Data Collection

Data was collected using semi-structured retrospective interviews with open-ended questions. Those questions were organized in three main blocks starting for the request

of a general description about the participant scholar trajectory, followed by intermediate questions about specific situations described in the aforementioned block, to finish in some ending question that requires that the interviewed reflects about specific aspects observed and made explicit by the interviewer. This was organised following Charmaz's guidelines [89], which explain the content of each block pointing about out the need while conducting this interview to "mentally categorise" the information being given and included it in the interview in the making. The importance of the interviews not being based on rigid structures and for it to be adaptable to each case was emphasized.

As Charmaz argues [89], reaching a comfortable environment is key for this interview to be fruitful, and for this reason the conversations took place in a familiar and discreet environment, making the interviewee feel relaxed and comfortable to share his story. To facilitate later analysis, the audio of the interviews was recorded. In accordance with research ethics, the interviewee signed an explicit consent form for the recording and was informed of who and how their interview would be processed, as well as being informed that it would be used in publications. All data has been anonymized to protect the person interviewed, names have been changed, and places and locations have been blacked out.

3.2. Sampling Criteria

The sample of this research is reduced to a single individual—Hercules—who was chosen as part of a wider investigation about school-to-work transitions in which his contact with gamification prior to dropping out was targeted. This positioned him as a unique case in the gamification literature, because, as seen in the introduction, the perceptions of students who have leave school early after having a contact with gamification has never been explored. Following this realization, it was decided to delve deeper into his life experience and make a specific interview about the topic of matter that has given grounds for the present paper.

The choice of a single subject for conducting this research may be controversial in terms of the generalization and external validity of the results displayed. However, we have followed the line of authors such as Ferrarotti [90] Stake, [91], or Merriam, [92], which recognize the importance of studying atypical cases, even if this is an individual person. We strongly advocate that this decision is fully supported by the literature, where authors such as Yin [93,94] have taken a clear position in favour of single-subject studies due to the capacity of these to challenge old theoretical assumptions and explore new categories of studies. In this line, Willis [95] points out that single subject studies are often questioned by positivist approaches, in search of representativeness of larger sample studies. However, he [95] claims that while multi-person studies are successfully showing the average of the experiences lived by participants, they sometimes forget the importance of knowing and understanding how phenomena unfold within an individual person. On the contrary, he explains, single-subject studies, originated in the interpretative paradigm, focus on understanding the complexity of a phenomenon through the voice of an individual, allowing scientists to test theories, to render description, and to further develop theory about several topics [96]. Single-subject studies are traditionally associated with a qualitative approach [95,97,98], and have their origin in renowned authors in the field of psychology such as Skinner or Freud, and for this reason they have been more widely used in this area. In the educational sphere, these studies have traditionally been linked to research on special education, although several authors [99–101] defend the convenience of spreading the use of these studies to other areas which fully support the decision of conducting this research.

3.3. Data Analysis and Category Selection Criteria

For data analysis, the Charmaz's Grounded Theory has been followed too. To do so, a process of initial coding also known as axial coding was made during interview. This was followed by a redefinition of categories by constant comparison assisted by a literature review until reaching focussed codes. After this, a refined process was conducted through

constant comparison, which was followed by peer-reviews needed for this publication, which led to the revision of axial coding and refining of categories and codes. This has given shape to the final draft presented in this paper. Doing this, we have strictly followed the inductive analysis described by Charmaz [102]. The flow of the analysis conducted could be follow in Figure 1:

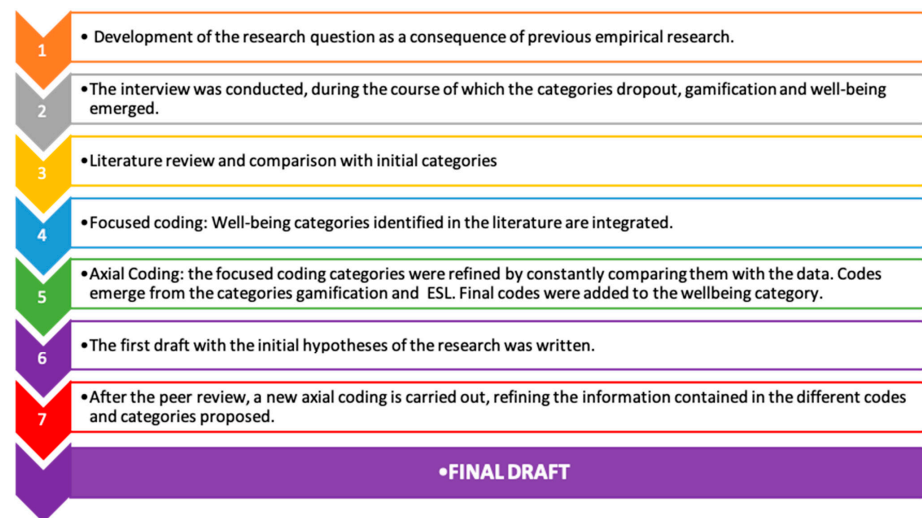


Figure 1. Flowchart of the analysis process followed in the research. Source: Authors own elaboration.

As seen in this figure, in step 4, some codes related to wellbeing were transferred from literature research, specifically from Framework for the Analysis of Student Well-Being in the PISA 2015 Study: Being 15 In 2015" [66] and used in PISA 2015. This decision was made because well-being has been widely criticized in the literature for its lack of specificity [65,103], and even when there are three main traditions regarding the concept: (1) hedonist happiness—centred view, (2) Developmental—psychological view and the newest of the approaches, the (3) multidimensional explanation [104], there is still a confusing panorama for this topic. This was adding to the important complication of the difficult task of exploring school leaving, a multidimensional phenomenon that together with gamification has limited theoretical background [105].

To do the data analysis, RQDA software has been used, as this has been identified by literature [106] as an adequate tool [87] to perform constructivist grounded theory analysis systematically, and has been a key element to create and negotiate codes and categories until theoretical saturation has been met as permits for both open coding and categorization.

3.4. Representativeness and Reliability of the Process

As previously mentioned, the Charmaz grounded theory is a clear departure from the more positivist version of the grounded theory initially presented by its founders, Glasser and Straus [107], in which there is a more traditional approach of knowledge and is consequently strongly relied in representativeness and saturation. In opposition to this, Charmaz acknowledges that researchers co-construct a reality, and following the interpretivist tradition, claims that any analysis is historically situated in a place, time, culture, and situation. Because of that, a constructivist grounded theorist moved themselves away from the traditional concept of saturation and introduced the concept of theoretical saturation, which relies on the depth and quality of interviews to unfold categories and codes, instead of on the size of the sample [86,87]. All information presented has reached theoretical saturation.

4. Results: The Life of Hercules

4.1. Brief Description of Hercules

Hercules is a 21-year-old boy that left school at the age of 19. He is currently living with his uncles in a household compounded by his three underage cousins, his uncles, his older brother, and himself. Only his uncle has a stable job in construction, being the only income for the family. With the aim of helping, Hercules sometimes has work in street vending at the beach. At this point, no one in the household has earned their secondary education degree. During the interview, he highlights his fighting attitude in the face of the difficult life circumstances that he has had to overcome throughout his childhood and adolescence. He never met his father until he was a teenager, when due to his mother's addictions he was forced to live with him for a full year. After his uncles gained custody, the father has retaken an absent role. His childhood was characterized by his mother's condition, which forced him to live unstable, with multiple changes of residence. In relation to his personal characteristics, he declares himself to be a "good" person, but "a lazy and influential fool".

4.2. Summary of the Dimensions of Hercules' Life

Below are the main results of each of the categories explored in the analysis of the interviews (see Table 1). The information contained here has been compared and contrasted until it reached theoretical saturation, i.e., until the Hercules interviews provided no new information for the proposed category.

Table 1. Summary of the dimensions of Hercules' life.

Cognitive Dimension	Hercules' perception of his cognitive abilities is closely linked to the school environment, and school results. He consequently associates his failure at school with low IQ and poor general skills. Describing himself as "dumb and lazy".
Psychological dimension	<p>This perception of his cognitive abilities affect him negatively, and causes his school expectations to be very low, anticipating failure even when the school year has not begun. These low expectations cause him to see himself as a stranger to the school environment, so much so that when asked directly about his school expectations he says: "I felt that the last thing I could do was study, that it wasn't my thing".</p> <p>Even so, he acknowledges that there are two moments in his school career when he felt motivated in the school environment. These are in the training course he is currently attending, and during a school year when a gamification experience was carried out in the classroom. However, his motivation, as he points out, comes from different circumstances, such as being able to find a better job in the first case, and methodological reasons in the second (both cases will be seen in more detail in the following sections).</p> <p>In general, when talking about his overall life satisfaction, he describes himself as happy, although he recognizes that there are very difficult moments in his daily life, motivated by economic tensions, the feeling of job uncertainty, family problems, and lack of fulfilment.</p>
Physical dimension	With regard to the physical dimension, Hercules claims to have more or less healthy habits, and highlights his position against drug consumption, both before and after dropping out of school.
Social dimension	<p>He constantly highlights the influence that the class group had on his school results, which was a major factor in leaving school, but makes it clear that he can only be influenced by "bad" things. This influence is identified as one of the factors that led to his desertion, as he was assigned to a class in which all the students were year-round students.</p> <p>The relationship with his teachers is also important to him: " that it is what I like, that they are good, that they treat you well and speak to you . . . and they are worried . . . I don't know . . . " In general, Hercules perceives that teachers have ignored his needs, although when asked why, he tends to take responsibility, explaining that for teachers to listen, you have to "study and do your homework" and he did none of these things. However, on the occasions when he has perceived success in the school environment, he attributes this success to external circumstances, in this case to the attitude and methodology of the teachers.</p> <p>As far as his relationship with his relatives is concerned, it should be noted that his mother has addiction issues, and his father, with the exception of one year in which he lived with him, has been totally absent. The relationship with the parents has therefore been unstable, and they have been little involved in the educational process. From the third secondary grade onwards, his uncles took custody of him, and both are very concerned for Hercules education.</p>

Table 1. Cont.

<i>Material dimension</i>	<p>From a material point of view, Hercules' life has been highly conditioned by his many changes of residence, which have been accompanied by changes of school. This is identified by the interviewee as a chaotic aspect, so much so that he is not even able to remember how many schools he has been to. These changes of residence and school have been accompanied by changes in legal custody, so it could be said that the material resources at their disposal have been unstable during their school years.</p> <p>It is significant that, although in all the schools and high schools where he has been, there were school counsellors as part of the resources of the center, who could have worked on some of Hercules' needs. He stresses that their role with respect to the students was absent, and that they never worked on their study techniques, their learning needs, their psychological needs, their self-esteem, or their self-concept.</p> <p>After leaving school, the low economic resources of his current family unit, made up of his older brother, his uncles, and his cousins, have forced Hercules to work in non-legislated activities, such as street vending on the beach. This was a source of discomfort for him, as he felt exploited and did not allow him to shape a future life plan. In addition, the lack of means to acquire a vehicle forced him to walk about 20 km every day, from his town to the neighboring town, which also created a great physical exhaustion for him.</p> <p>In the future, his aspiration is to be able to help his family financially.</p>
<i>Socio-historical dimension</i>	<p>The context in which the gamification experience takes place has some very specific characteristics, partly as a result of the conditions of the Spanish Curricular Diversification Program aimed at students at risk of school failure and that want to finish compulsory secondary education, which has recently disappeared as part of the latest legislative changes. The program, in which this student took part, was characterized by a lower ratio and a greater flexibility and openness of the curriculum, which allows subjects to be worked on together and to have a general teacher for several areas, conditions which are totally opposite to which was the school environment up to that moment for Hercules, characterized by ordinary lessons with between 25 to 30 students and specialist teachers for each of the subjects.</p>
<i>Gamification and ESL</i>	<p>Within these circumstances, the weight of the teacher who carries out the gamification experience (both in class hours and on a methodological and social level) stands out, a factor that has been highlighted as very positive by Hercules. The gamification was carried out with the whole group, dividing them into small subgroups of two students. The theme chosen for this experience was ancient civilizations, specifically Egypt and Mesopotamia. These groups were assigned tasks in relation to the curriculum of the year, after their completion they were rewarded with "tokens", in this case soldiers or food, which gave power to their civilization.</p> <p>Hercules emphasizes that, despite being a complicated year in the family environment, as a result of his mother's entry into prison, unlike previous years with this methodology he approved all the subjects, obtaining in many of them the qualification of outstanding: "I even got a high score and I passed everything, I got up to nine . . . ". Furthermore, and despite the fact that Hercules presents a low self-concept, identifying himself as a lazy person, he states that in that year he was sufficiently motivated to work at home if necessary, attributing his success directly to the teacher." During the period that gamification existed, Hercules and his companions showed a significant improvement in their academic results, and furthermore, individually, as our interviewee experienced a significant increase in motivation and attachment to the school environment as well as a loss of motivation and interest. However, he claims that this led, after one school year, to early school leaving. Once this experience ended, his results fell back to the levels of the past, with a detrimental effect on engagement.</p>

Source: Author's own elaboration.

4.3. The Power of Gamification As a Tool to Tackle Early School Leaving and Improve Adolescent Well-Being

As would be seen below, the life story of Hercules shows us that gamification as a technique can have a positive effect on the well-being of adolescents at risk of leaving school early and could act as a protective factor against the decision to leave. However, those improvements in well-being are limited to the school environment, increasing the affection for school, the sense of permanence, and improving results in a notable way during the gamification process. In contrast to this, it also allows us to observe that once this methodology is withdrawn, a rebound effect can occur, turning the said gamification

period into a risk factor for leaving school. The data resulting from the analysis that supports the formulation of this hypothesis are presented below:

4.3.1. A Scholar Trajectory until Gamification

Hercules' school trajectory to this gamification experience is characterized by continuous changes of home and school, accompanied by a clear absence of family support, resulting from the addictions of his mother and an absent father.

"I don't even remember where I started school, and I think I went to all the schools in **** (the town where the interview was held). I spent a year, I think, in ***** (a nearby town), where I had to go and live with my father, and so as not to lose a year, I signed up for school there. This was the first time meeting my dad, and next year he was gone, I have never seen him again"

Among his characteristics, he stands out for his low self-esteem and for being highly influenceable regarding his group of equals, especially for bad behaviors.

"I am very influenceable . . . Once I even got influenced by a handwriting. I sat down with a friend, and I saw him writing and accidentally copied his handwriting . . . I am very easily influenced (. . .) Although, when I went from sixth grade to first secondary grade with all my friends, one of them was the smartest of the whole group, he was a nerd and was studying all the time . . . everything! But no, I didn't get influenced by him at all . . . "

At school we can highlight a low performance and two repetitions of the course. We can clearly see that before the gamification experience, he identified himself as dumb and lazy. Furthermore, he points out that he is disengaged from the school environment, which he perceives as something unrelated to himself. He declares that teachers do not usually "like" him and that they do not pay attention to him, something that acts as a source of discomfort, even though he sees this as his own sets of personal characteristics.

"The second time I did grade six I was approached by a very perfectionist teacher and I said: "Listen, teacher, I'm stupid" [. . .]". Teachers don't like people like me, they ignore me, but this is normal" [. . .] "I felt that the last thing I could do was study, that it wasn't my thing".

Although he points out that there were a couple of teachers on this path that he liked and who tried to help and motivate him, he recognizes that this did not have an impact on his grades.

"Once I have a good teacher in la ESO (secondary education) that was very good to me, she told me that I wasn't a dumb, she was good, but I failed as always"

4.3.2. During the Gamification Process

The context in which the gamification experience takes place has some very specific characteristics, partly as a result of the conditions of the Spanish Curricular Diversification Program, which recently disappeared as part of the latest legislative changes. This program, in which this student took part, was characterized by a lower ratio and a greater flexibility and openness of the curriculum, which allows subjects to be worked on together and to have a general teacher for several areas. Conditions which are totally opposite to what has been the school environment up to that moment for Hercules, which was characterized by ordinary lessons with between 25 and 30 students and specialist teachers for each of the subjects.

"I had a kind of class, which was very good, which was like . . . I don't know, we were always together, everything was perfect for us and we were 10 students".

Within these circumstances, the weight of the teacher who carried out the gamification experience stands out as a factor that has been highlighted as very positive by Hercules.

“I was influenced by the teacher, who was very good, I liked him very much . . . and he was with us all the time, he gave us almost everything . . . that teacher . . . I liked him very much”

The gamification was carried out with the whole group, dividing them into small subgroups of two students. The theme chosen for this experience was ancient civilizations, forming groups that have to fight academically to conquer the other civilization. All activities during the day were arranged to facilitate the “academic war”. The teams were Egypt and Mesopotamia.

“I liked the way the teacher did it . . . he even played games and everything. For example, there was one thing, called gamification, which organized us in groups of two . . . and then two big groups, one was Egypt and the other Mesopotamia. I even looked for a nickname! I was “Tutankhamun of the first-grade classroom” [. . .]. “I have never liked more going to school”

These groups were assigned tasks in relation to the curriculum of the year, after completion they were rewarded with “tokens”, those being soldiers, materials, or food, which gave power to their civilization.

“And every time we finished an activity the teacher gave us soldiers or food. Then, sometimes you have to fight it, it was like a duel and you had to fight . . . we arrange everything, it was very cool”.

Hercules emphasizes that, despite being a complicated year in the family environment as a result of his mother’s entry into prison, unlike previous years, with this methodology he passed all subjects, obtaining in many of them the qualification of outstanding: “I even got a high score and I passed everything, I got up to nine . . . “. Furthermore, and despite the fact that Hercules presents a low self-concept, identifying himself as a lazy person, he states that in that year he was sufficiently motivated to work at home if necessary, attributing his success directly to the gamification process:

“This year I didn’t feel like always. I even did homework and everything [. . .] I really liked this game [. . .] I worked at home, I did everything he would send me, I was motivated, I was not even lazy . . . that was because of my teacher, who I liked. (. . .) And my classmates flourished the same way, there was one mate who used to fall asleep in every class and that year he approved everything! That was because we all liked the game of Egypt and Mesopotamia”

4.3.3. After Gamification

The end of the gamified experience coincided with the end of the academic year. The following year, Hercules continued in the same “curriculum diversification program”, but the teacher changed, and the methodology disappeared. From that moment on, our interviewee’s grades dropped drastically, failing several subjects and qualifying to repeat the course.

Hercules assures that the change in methodology was the end point, and led him to leaving school, since it meant a significant loss of the school welfare he had during the previous year. He went back to experiencing a period of disaffection at school, feeling “dumb” and “lazy” and despite the fact that by then his uncles had gained custody of him and were trying to help him academically, he ended up leaving.

“In the next year, this was the worst . . . things changed . . . , and I . . . went back to the way I was . . . I didn’t like it to see me like this again because I was feeling so good, same thing again, that was it . . . I started to fail, they started to leave me behind. The teacher tried to be good to me . . . (. . .) but the next year . . . that was it . . . that was it”.

In this life story we can observe some contradictory or confusing data regarding our hypothesis, but we consider that there is sufficient data to contrast this. First, we acknowledge that effects and improvement in Hercules’ self-perception, grades, and sense

of belonging to school could be attributed to the positive relationship created with the teacher and to the fact that he was attending a program characterized by a low ratio and a reorganization of school subjects, we consider that these factors, although being determinants, are not explanatory for the improvement of well-being and school results by itself. As Hercules declares that in previous years, he has had a good relationship with some teachers without this impacting on his grades, and because in the following year, the class group and program was maintained without this affecting his grades positively. Secondly, it could be argued that the exponential increase in school disaffection, even when the school circumstances are maintained, could be explained by factors external to the school environment, but we see that Hercules' life acquires stability the year after the gamification experience, when his uncles acquired custody, which gave him material stability and increased academic support, but with this having no power over this final process of disaffection.

We consider that, from the data presented, it is possible to establish the hypothesis that gamification, if conducted globally or interconnected within multiple subjects, can act as a protective factor against early school leaving during the time that this methodology is conducted. This seems to be because there is an improvement on the well-being associated with the educational environment, producing an increase in the affection towards the institution and an improvement in school grades. However, at the same time, it can act as a risk factor when withdrawn, as it causes in this particular case a shock that seems to cause a rebound effect in regard to school disaffection.

5. Discussion

5.1. Gamification: A Protective Factor against ESL during Its Conductions that Could Negatively Impact Engagement Once Withdrawn

This grounded theory investigation has shown that students at risk of leaving school early seem to be interested in gamification, which seems to have a positive effect on their motivation, engagement, and well-being in school, as well as a significant increase in their grades. This follows the line of those studies not specifically focused on school leaving that show a positive relationship between gamification and the improvement of school motivation [44,46–51], reinforcing the idea that this effect occurs quickly [52,53], since in this specific case the improvements occur from the beginning of the gamification experience.

In addition, while this case explicitly states the existence of competitiveness among its participants, which is one of the most commonly used arguments against gamification [46,56–58], it does not seem to be associated with a negative feeling, nor with a decrease in the learner's well-being. On the contrary, it seems to act as a motivational element at a team level, with benefits reported by the interviewee at both an individual and group level. Reinforcing more Vygotskian views of learning, this motivation for competition seems to be explained by a positive socio-emotional interaction and framed within an organisation of learning adapted to the abilities of the participating pupils. The selections carried out in the PDC programme according to abilities and academic results [33], may play a role in enabling this balance between competitiveness and well-being/motivation insofar as, a priori, everyone starts from a similar level, making it possible to access balanced experiences of success (token winning).

Moreover, this research reinforces the idea that gamification can be effective for students with learning difficulties [59], as it has been observed that during the gamified period there is a clear improvement in the emotional perceptions of students towards the school institution and a loss of fear of certain subjects.

In addition, is also interesting to note that while studies on gamification in secondary education have been carried out based on experiences in which it has been conducted on a specific subject [23,59], with results that are still inconclusive, this research has allowed us to observe the effects that gamification has when it is worked on jointly in several subjects, as the curricular structure of the PDC [33] has acted as an experimental laboratory to observe the sustainability of this implementation in a globalised manner, resulting in a

positive experience. The results reinforce the idea that problem-oriented cooperative whole school interventions are needed to combat early school leaving [12,35,65].

Despite all this, on a more negative note, this research showed the positive effects on school motivation described in the literature [44,46–51] and, therefore, its impact on well-being in the school environment and engagement. These effects seem to be limited to the period in which gamification takes place for this at-risk pupil, without having lasting positive results. It should also be noted that just as these effects appeared quickly [52,53], they also disappeared easily. As Hercules' story shows, a rebound effect can be caused once said methodology disappears, leaving the student with a feeling of helplessness that can lead to one more risk factor to add for school leaving to occur, leading to a perception of bad performance in the academic sphere in which the gamification period, and the perceived success during the process, comes to be understood as a kind of one hit wonder.

5.2. The Implications on Well-Being

This life story has also allowed us to reflect on the concept of well-being, and, through grounded theory, observe how it develops in adolescence as part of the school environment. As we said in the background section, well-being is still a blurred concept with multiple definitions [65,103] and traditions. This research has reinforced those theories defending the multidimensionality of well-being [104], because, during the category formation process we have been able to observe the coexistence of multiple dimensions of well-being, which, although they are more or less related, seem to operate on an individual and independent level, coexisting with periods in which, for example, there is great uneasiness in the social-family dimension of Hercules, where we find the entry of his mother into prison, which coexists with periods identified as happy and positive, with a significant academic growth in the school environment.

In addition to this, it is also important to reflect on the appropriateness of the methodology used to explore this relationship. As we have seen, to carry out this study we have relied on the categories designed for a study related to well-being in the school environment carried out by the OECD, as part of its well-known PISA studies [66]. These categories have worked relatively well when transferred to the qualitative method and have reached the theoretical saturation in the sample that the Hercules story implies. However, we have found a main problem, the lack of integration of social devices and historical conditions between these categories, which has required the addition of a new category, the socio-historical one. To this end, it has been of vital importance to cross the multidimensionality studied around well-being and the multidimensionality of ESL. The phenomenon of early school leaving, as mentioned earlier, must be understood as a phenomenon arising from multiple interrelated factors [36], but in which social and historical circumstances have a great weight, and factors such as educational and health policies, working conditions, changes in age-specific norms have a direct effect on students, acting as a protective or influential factor in their leaving [5]. If we understand this to be the case, it also seems clear that these same conditions, their presence or absence, are going to cause an impact on the well-being of this population. This has been reflected in the case of Hercules, where the educational policies available at that time and their effects on the school environment are relevant to understanding this case, since the success of this gamification experience seems to depend largely on the characteristics of the group and its ratio defined by the Curriculum Diversification program, as well as on the regrouping of subjects and them being leised by a generalist teacher.

It has often been required that this socio-historical dimension be taken into account in the study of ESL [36], in order to avoid the responsibility for it falling on the individual and to avoid a conception guided by capitalist or materialist visions of education [69,70]. Similarly, if we ignore this dimension in well-being, we may be in danger of turning it into a double-edged sword, which, while identifying it as an important element for the correct development of life, points to individuals and their environment as the only ones responsible for reaching this ideal state, ignoring a whole series of social and historical

devices that will have great relevance for the chances of the individual reaching a certain state of well-being [108].

6. Conclusions

The main objective of this article was to find out possible interactions between game-based teaching techniques, the well-being of students who are at risk, and the decision of leaving school prematurely through a personal narrative. As we have seen, the literature on gamification minimally explored the perceptions of participants in gamification experiences at stages other than the university level [25]. Furthermore, there was an important gap in the literature on early school leavers and gamification, with the exception of recent descriptive studies about specific software for working with possible at-risk students [24–26]. Consequently, the interaction between early school leavers and gamification was not assessed, making this research a pioneer not only in studying this interrelationship, but also in doing so from the point of view of an early school leaver.

Despite the limitations of this study, derived from the small size of the sample selected, and distancing ourselves from the intention of making generalizable claims, we consider that this study shows important hypotheses that can contribute to the development of the literature on early school leavers and gamification at the international level, with relevant conclusions also about the role of well-being in the process. These include among others the performance of gamification as a protective factor against ESL during the gamification process and the disappearance of these effects once the methodology has been withdrawn. Taking this into account, we can conclude that the objectives proposed for the study have been fully met, always bearing in mind that this case is defined by very specific socio-economic, historical, and situational conditions, and that therefore these results will have to be investigated on a larger scale if they are to be generalised.

Author Contributions: Conceptualization, L.G.-P.; methodology, L.G.-P.; software, L.G.-P.; formal analysis, L.G.-P.; investigation, L.G.-P. and M.A.G.; resources, L.G.-P.; data curation, L.G.-P.; writing—original draft preparation, L.G.-P.; writing—review and editing, L.G.-P.; visualization, L.G.-P.; supervision, L.G.-P.; project administration, L.G.-P.; funding acquisition, L.G.-P. and M.A.G. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data has been curated and processed following MDPI Research Data Policies" available at <https://www.mdpi.com/ethics> (accessed on 27 February 2021).

Acknowledgments: This article is part of the thesis of the main author L. G-P, who is undertaking a doctoral program at the University of Granada, Spain.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Council of the European Union. Council Conclusions on a Strategic Framework for European Cooperation in Education and Training ("ET 2020"). Document 17535/08. 2019. Available online: http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/107622.pdf (accessed on 26 February 2020).
2. European Commission. Tackling Early School Leaving: A key Contribution to the Europe 2020 Agenda. COM 2011, 18 Final. Available online: http://ec.europa.eu/education/school-education/doc/earlycom_es.pdf (accessed on 26 February 2020).
3. Guerrero, L. El abandono escolar prematuro en España, un reto para el sistema educativo español. In Proceedings of the XIV Congreso Internacional de Teoría de la Educación 2017, Murcia, Spain, 21–23 November 2017; pp. 987–995, ISBN 978-84-697-7896-8.
4. Tarabini, A.; Rambla, X. ¿De nuevo con el abandono escolar? Un análisis de políticas, prácticas y subjetividades. *Profr. Rev. Currículum Form. Profr.* **2015**, *19*, 1–7. Available online: <http://www.redalyc.org/articulo.oa?id=56743410001> (accessed on 26 February 2020).
5. Escudero, J.M.; González, M.T.; Martínez, B. El fracaso escolar como exclusión educativa: Comprensión, políticas y prácticas. *Rev. Iberoam. Educ.* **2009**, *50*, 41–64. [[CrossRef](#)]
6. Enguita, F.M. Del desapego al desenganche y de éste al fracaso escolar. *Propues. Educ.* **2011**, *35*, 85–94. [[CrossRef](#)]

7. Tarabini, A.; Jacovkis, J.; Montes, A. Factors in educational exclusion: Including the voice of the youth. *J. Youth Stud.* **2017**, 1–16. [CrossRef]
8. Van Houtte, M. So Where's the Teacher in School Effects Research?: The Impact of Teacher's Beliefs, Culture, and Behavior on Equity and Excellence in Education. In *Equity and Excellence in Education: Towards Maximal Learning Opportunities for All Students*; Van Den Branden, K., Van Avermaet, P., Van Houtte, M., Eds.; Routledge: New York, NY, USA, 2011; pp. 75–95.
9. Castel, R. *La Metamorfosis de la Cuestión Social*; Paidós: Madrid, Spain, 1997.
10. Amores Fernández, F.J.; Luengo Navas, J.; Ritacco, R.M. Educar en contextos de exclusión social: Necesidades y cambios desde la perspectiva del profesorado. Un estudio de casos en la provincia de Granada. *Rev. Fuentes* **2012**, *12*, 187–206. Available online: <https://idus.us.es/bitstream/handle/11441/32984/Educar%20en%20contextos%20de%20exclusion%20social.pdf?sequence=1&isAllowed=y> (accessed on 26 February 2020).
11. Reay, D.; Gill, C.; David, J. *White Middle-Class Identities and Urban Schooling*; Palgrave Macmillan: London, UK, 2001; Available online: <https://www.palgrave.com/gp/book/9780230224018> (accessed on 26 February 2020).
12. Rampazzo, L.; Davis, R.J.; Carbone, S.; Mocanu, A.; Champion, J.; Carta, M.G.; Danielsdóttir, S.; Holte, A.; Huurre, T.; Matloňová, Z.; et al. Situation Analysis and Recommendations for Action. 2017. Available online: https://ec.europa.eu/health/sites/health/files/mental_health/docs/2017_mh_schools_en.pdf (accessed on 26 February 2020).
13. European Commission Mental Health: Challenges and Possibilities, Conference Proceedings. 2013. Available online: https://ec.europa.eu/health/sites/health/files/mental_health/docs/lt_presidency_vilnius_conclusions_20131010_en.pdf (accessed on 26 February 2020).
14. Zichermann, G.; Cunningham, C. *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*; O'Reilly Media, Inc.: Sebastopol, CA, USA, 2011.
15. Werbach, K.; Hunter, D. *For the Win: How Game Thinking Can Revolutionize Your Business*; Wharton Digital Press: Philadelphia, PA, USA, 2012.
16. Gómez, R.; García, A. Bibliotecas, juegos y gamificación: Una tendencia de presente con mucho futuro. *Anu. ThinkEPI* **2018**, *12*, 125–135. [CrossRef]
17. Corchuelo, C.A. Gamificación en educación superior: Experiencia innovadora para motivar estudiantes y dinamizar contenidos en el aula. *Edutec. Rev. Electrón. Tecnol. Educ.* **2018**, *63*, 29–41. [CrossRef]
18. Gómez, I.M.; Ruiz, M. Análisis sobre nuevas metodologías activas basadas en el ABP y en la Gamificación en los estudios de Máster del Profesorado en Educación Secundaria. In Proceedings of the XV Jornadas de Redes de Investigación en Docencia Universitaria—REDES Libro de Actas, Alicante, Spain, 1–2 June 2017.
19. Pintor, P. Gamificando con Kahoot! En evaluación formativa. *Infanc. Educ. Aprendiz. IEYA* **2017**, *3*, 112–117. [CrossRef]
20. Fernández, J.; Prieto, E.; Alcaraz, V.; Sánchez, A.J.; Grimaldi, M. Aprendizajes Significativos mediante la Gamificación a partir del Juego de Rol: “Las Aldeas de la Historia”. *Espiral. Cuad. Profr.* **2018**, *11*, 69–78. [CrossRef]
21. Fernández-Gavira, J.; García-Fernández, J.; Sánchez-Oliver, A.J.; Grimaldi-Puyana, M. Gamificación, Emprendimiento y Deporte mediante las Aplicaciones Móviles. In *INNOVAGOGÍA 2016. III. Congreso Internacional sobre Innovación Pedagógica y Praxis Educativa. Proceedings*; López-Meneses, E., Cobos Sanchiz, D., Martín Padilla, A., Molina-García, Jaén Martínez, A., Eds.; AFOE Formación: Sevilla, Spain, 2017.
22. Martínez, J. Gamificando el Huerto Escolar en Educación Primaria. Los Super Héroes al Rescate. In Proceedings of the III Congreso Internacional de Educación Mediática y Competencia Digital; 2017. Available online: <http://ocs.editorial.upv.es/index.php/HEAD/HEAD20/paper/viewFile/10960/5527> (accessed on 27 February 2021).
23. Manzano, A.P.; Baeza, J.A. Gamificación transmedia para la divulgación científica y el fomento de vocaciones procientíficas en adolescentes. *Comun. Rev. Cient. Iberoam. Comun. Educ.* **2018**, *55*, 93–103.
24. Peirats Chacón, J.; Marin Suelves, D.; Vidal Esteve, M.I. *Bibliometría Aplicada a la Gamificación Como Estrategia Digital de Aprendizaje*; 2019; Available online: <https://revistas.um.es/red/article/view/386921> (accessed on 27 February 2021).
25. Tsalapatas, H.; Heidmann, O.; Alimisi, R.; Koutsaftikis, D.; Tsalapatas, S.; Houstis, E. A Gamified Community for Fostering Learning Engagement Towards Preventing Early School Leaving. In *International Conference on Serious Games, Interaction, and Simulation*; Springer: Cham, Switzerland, 2015; pp. 86–93.
26. Bates, M.; Saridaki, M.; Kolovou, E.; Mourlas, C.; Brown, D.; Burton, A.; Yarnall, T. *Designing Location-Based Gaming Applications with Teenagers to Address Early School Leaving*; Academic Conferences International Limited: Reading, UK, 2015; Available online: <https://search.proquest.com/conference-papers-proceedings/designing-location-based-gaming-applications-with/docview/1728409717/se-2?accountid=14542> (accessed on 26 February 2020).
27. Tarabini, A.; Fontevlia, C.; Curran, M.; Montes, A.; Parcerisa, L.; Rambla, X. *¿Continuidad o Abandono Escolar? El Efecto de la Escuela en las Decisiones de los Jóvenes*; Centro Reina Sofía: Barcelona, Spain, 2015.
28. Network of Experts in Social Sciences of Education and Training (NESSE). *Early School Leaving. Lessons from Research for Policy Makers*; INRP: Paris, France, 2009; Available online: <http://www.nesse.fr> (accessed on 26 February 2020).
29. Instituto Nacional de Estadística (INE). *Base de Datos*; Gobierno de España: Madrid, Spain, 2020.
30. Psacharopoulos, G. *The Costs of School Failure: A Feasibility Study*; EENEE: Brussels, Belgium, 2007.
31. Luzón, A.; Torres, M. *Las Políticas Educativas Contra el Abandono Escolar Temprano en Andalucía: La Beca 6000*; Universidad de Granada: Granada, Spain, 2015.

32. Escudero Muñoz, J.M.; Martínez Domínguez, B. *Policies for Combating School Failure: Special Programmes or Sea Changes in the System and in Education?* Ministerio de Educación: Madrid, Spain, 2012.
33. Martínez Medina, F. *Programas de Diversificación Curricular: Una Medida de Atención a la Diversidad*; Revista Digital: Innovación y Experiencias Educativas: Spain, 2009; Volume 16, Available online: https://archivos.csif.es/archivos/andalucia/ensenanza/revistas/csicsif/revista/pdf/Numero_16/Francisca_Martinez_2.pdf (accessed on 27 February 2021).
34. Tedesco, J.C. Modelo pedagógico y fracaso escolar. In *Revista de la CEPAL*; UN, 1983; Available online: <http://otrasvoceseneducacion.org/wp-content/uploads/2019/04/Modelo-Pedago%CC%81gico-y-Fracaso-Escolar-Juan-Carlos-Tedesco.pdf> (accessed on 26 February 2020).
35. Wehlage, G.G.; Rutter, R.A.; Smith, G.A.; Lesko, N.; Fernandez, R.R. *Reducing the Risk: Schools as Communities of Support*; Falmer Press: New York, NY, USA, 1989.
36. Escudero, J.M. Fracaso Escolar, exclusión educativa: ¿de qué se excluye y cómo? *Profr. Rev. Curric. Form. Profr.* **2005**, *1*, 1–24.
37. Kalmppourtzis, G. *Educational Game Design Fundamentals: A Journey to Creating Intrinsically Motivating Learning Experiences*; AK Peters/CRC Press: New York, NY, USA, 2018.
38. Perrotta, C.; Featherstone, G.; Aston, H.; Houghton, E. *Game-Based Learning: Latest Evidence and Future Directions*; NFER: Slough, UK, 2013.
39. Hamari, J.; Shernoff, D.J.; Rowe, E.; Coller, B.; Asbell-Clarke, J.; Edwards, T. Challenging games help students learn: An empirical study on engagement, flow and immersion in game-based learning. *Comput. Hum. Behav.* **2016**, *54*, 170–179. [[CrossRef](#)]
40. Denham, A.R.; Mayben, R.; Boman, T. Integrating game-based learning initiative: Increasing the usage of game-based learning within K-12 classrooms through professional learning groups. *TechTrends* **2016**, *60*, 70–76. [[CrossRef](#)]
41. Whitton, N. Encouraging engagement in game-based learning. *Int. J. Game Based Learn. IJGBL* **2011**, *1*, 75–84. [[CrossRef](#)]
42. Ara, S. Use of songs, rhymes and games in teaching English to young learners in Bangladesh. *Dhaka Univ. J. Linguist.* **2009**, *2*, 161–172. [[CrossRef](#)]
43. Lee, J.J.F.; Pruitt, K.W. Homework assignments: Classroom games or teaching tools? *Clear. House* **1979**, *53*, 31–35. [[CrossRef](#)]
44. Álvaro-Tordesillas, A.; Alonso-Rodríguez, M.; Poza-Casado, I.; Galván-Desvaux, N. Gamification experience in the subject of descriptive geometry for architecture. *Educ. XXI* **2019**, *23*. [[CrossRef](#)]
45. Deterding, S.; Dixon, D.; Khaled, R.; Nacke, L. From game design elements to gamefulness: Defining “gamification”. In Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments, Tampere, Finland, 28–30 September 2011; pp. 9–15.
46. Barata, G.; Gama, S.; Jorge, J.A.; Gonçalves, D.J. Relating gaming habits with student performance in a gamified learning experience. In Proceedings of the First ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play, Toronto, ON, Canada, 19–22 October 2014; pp. 17–25.
47. Araya, R.; Arias Ortiz, E.; Bottan, N.L.; Cristia, J.P. Does Gamification in Education Work?: Experimental Evidence from Chile. IDB. Working Paper. 2019. Available online: <https://www.semanticscholar.org/paper/Does-Gamification-in-Education-Work-%3A-Experimental-Araya-Ortiz/ad817d9f526584f3cef76d0629dbe326e2df2421> (accessed on 27 February 2021).
48. Domínguez, A.; Saenz-De-Navarrete, J.; De-Marcos, L.; Fernández-Sanz, L.; Pagés, C.; Martínez-Herráiz, J. Gamifying learning experiences: Practical implications and outcomes. *Comput. Educ.* **2013**, *63*, 380–392. [[CrossRef](#)]
49. Groening, C.; Binnewies, C. “Achievement unlocked!”—the impact of digital achievements as a gamification element on motivation and performance. *Comput. Hum. Behav.* **2019**, *97*, 151–166. [[CrossRef](#)]
50. Maican, C.; Lixandrou, R.; Constantin, C. Interactivia. ro—A study of a gamification framework using zero-cost tools. *Comput. Hum. Behav.* **2016**, *61*, 186–197. [[CrossRef](#)]
51. Prieto-Andreu, J.M. Una revisión sistemática sobre gamificación, motivación y aprendizaje en universitarios. *Teor. Educ. Rev. Interuniv.* **2020**, *32*, 73–99. [[CrossRef](#)]
52. Alsawaier, R.S. The effect of gamification on motivation and engagement. *Int. J. Inf. Learn. Technol.* **2018**, *35*, 24. [[CrossRef](#)]
53. Lister, M. Gamification: The effect on student motivation and performance at the post-secondary level. *Issues Trends Educ. Technol.* **2015**, *3*. [[CrossRef](#)]
54. González, M. Técnicas de gamificación aplicadas en la docencia de Ingeniería Informática. *ReVisión* **2015**, *8*, 1–12.
55. Camacho, P.; Vega, J.; Guerreiro, M.A.; Guerrero, L.; Alías, A. *Estrategias de Enseñanza Innovadoras para Nuevos Escenarios de Aprendizaje*; Dykinson: Madrid, Spain, 2019; pp. 115–125. Available online: <https://www.jstor.org/stable/j.ctv105bcrt> (accessed on 26 February 2020). [[CrossRef](#)]
56. Van der Kooij, K.; van Dijsseldonk, R.; van Veen, M.; Steenbrink, F.; de Weerd, C.; Overvliet, K.E. Gamification as a sustainable source of enjoyment during balance and gait exercises. *Front. Psychol.* **2019**, *10*, 294. [[CrossRef](#)] [[PubMed](#)]
57. Markopoulos, A.P.; Fragkou, A.; Kasidiaris, P.D.; Davim, J.P. Gamification in engineering education and professional training. *Int. J. Mech. Eng. Educ.* **2015**, *43*, 118–131. [[CrossRef](#)]
58. Calonge, L. Cómo gamificar una práctica de laboratorio para estudiantes de magisterio. In Proceedings of the XX simposio Sobre Enseñanza de la Geología, Menorca, Spain, 9–14 July 2018.
59. Kalogiannakis, M.; Papadakis, S.; Zourmpakis, A.-I. Gamification in Science Education. A Systematic Review of the Literature. *Educ. Sci.* **2021**, *11*, 22. [[CrossRef](#)]

60. Manzano-León, A.; Camacho-Lazarraga, P.; Guerrero-Puerta, M.A.; Guerrero-Puerta, L.; Alías, A.; Trigueros, R.; Aguilar-Parra, J.M. Adaptation and Validation of the Scale of Types of Users in Gamification with the Spanish Adolescent Population. *Int. J. Environ. Res. Public Health* **2020**, *17*, 4157. [[CrossRef](#)]
61. O'Connor, C.A.; Dyson, J.; Cowdell, F.; Watson, R. Do universal school-based mental health promotion programmes improve the mental health and emotional wellbeing of young people? A literature review. *J. Clin. Nurs.* **2018**, *27*, e412–e426. [[CrossRef](#)] [[PubMed](#)]
62. Wexler, P. *Becoming Somebody: Towards a Social Psychology of the School*; Falmer Press: London, UK, 1992.
63. Smyth, J.; Hattam, R. *'Dropping Out', Drifting Off, Being Excluded: Becoming Somebody without School*; Peter Lang: New York, NY, USA, 2004.
64. Mchugh, K. No Second chances: Want to meet the needs of early school-leavers? Focus on their mental health). *Adult Learner: Ir. J. Adult Community Educ.* **2015**, 61–74. Available online: <https://files.eric.ed.gov/fulltext/EJ1077725.pdf> (accessed on 26 February 2020).
65. Govorova, E.; Benítez, I.; Muñiz, J. Predicting Student Well-Being: Network Analysis Based on PISA 2018. *Int. J. Environ. Res. Public Health* **2020**, *17*, 4014. [[CrossRef](#)] [[PubMed](#)]
66. Borgonovi, F.J.P. *A Framework for the Analysis of Student Well-Being in the Pisa 2015 Study: Being 15 In 2015*; OECD Publishing: Paris, France, 2016.
67. European Commission. *Mental Health: Challenges and Possibilities*; ECHI: Vilnius, Lithuania, 2013.
68. Downes, P. The Neglected Shadow: European perspectives on emotional supports for early school leaving prevention. *Int. J. Emot. Educ.* **2011**, *3*, 1–34.
69. Novóa, A. The Blindness of Europe: New Fabrications in the European Educational Space. *J. Educ.* **2013**, *1*, 104–123. [[CrossRef](#)]
70. Valiente, O.; Capsada-Munsech, Q.; de Otero, J.P.G. Educationalisation of youth unemployment through lifelong learning policies in Europe. *Eur. Educ. Res. J.* **2020**, 1–19. [[CrossRef](#)]
71. Limerick Health Promotion Service. "Nihil Nisi Labore"-'Nothing Achieved Without Effort" Health Impact Assessment of Early School Leaving, Absenteeism and Truancy. 2008. Available online: <http://www.limerickregeneration.org/hia-early-school-leavers.pdf> (accessed on 26 February 2020).
72. Higgins, C.; Lavin, T.; Metcalfe, O. *Health Impacts of Education—A Review*; Institute of Public Health in Ireland: Dublin, Ireland, 2008.
73. Rumberger, R.W. *Dropping Out: Why Students Drop Out of High School and What Can Be Done about It*; Harvard University Press: Cambridge, MA, USA, 2011.
74. Benito, A. La LOE ante el fracaso, la repetición y el abandono escolar. *Rev. Iberoam. Educ.* **2007**, *43*, 1–11.
75. Liem, J.H.; Dillon, C.O.; Gore, S. Mental Health Consequences Associated with Dropping Out of High School. In Proceedings of the 109th Annual Conference of The American Psychological Association, San Francisco, CA, USA, 24–28 August 2009.
76. Benjet, C.; Hernández-Montoya, D.; Borges, G.; Méndez, E.; Medina-Mora, M.E.; Aguilar-Gaxiola, S. Youth who neither study nor work: Mental health, education and employment. *Salud Publica Mex.* **2012**, *54*, 410–417. [[CrossRef](#)] [[PubMed](#)]
77. Benjet, C.; Borges, G.; Medina-Mora, M.E.; Zambrano, J.; Aguilar-Gaxiola, S. Youth mental health in a populous city of the developing world: Results from the Mexican Adolescent Mental Health Survey. *J. Child Psychol. Psychiatry* **2009**, *50*, 386–395. [[CrossRef](#)]
78. Daniel, S.S.; Walsh, A.K.; Goldston, D.B.; Arnold, E.M.; Reboussin, B.A.; Wood, F.B. Suicidality, school dropout, and reading problems among adolescents. *J. Learn. Disabil.* **2006**, *39*, 507–514. [[CrossRef](#)]
79. McCoy, S.; Kelly, E.; Watson, D. *School Leavers Survey Report*; ESRI and Department of Education and Science: Dublin, Ireland, 2007.
80. Marmot, M.G.; Wilkinson, R.G. *Social Determinants of Health*, 2nd ed.; Oxford University Press: Oxford, UK, 2006.
81. Ferrie, J.; Shipley, M.; Stansfeld, S.; Marmot, M. Effects of chronic job insecurity on self-reported health, minor psychiatric morbidity, physiological measures, and health related behaviours in British civil servants: The Whitehall II study. *J. Epidemiol. Community Health* **2002**, *56*, 450–454. [[CrossRef](#)]
82. Balanda, K.; Wilde, J. *Inequalities in Mortality 1989–1998: A Report on All-Ireland Mortality Data*; Institute of Public Health: Dublin, Ireland, 2001.
83. Rosenthal, B.S. Non-school correlates of dropout: An integrative review of the literature. *Child. Youth Serv. Rev.* **1998**, *20*, 413–433. [[CrossRef](#)]
84. Charmaz, K. Grounded theory: Objectivist and constructivist methods. *Handb. Qual. Res.* **2000**, *2*, 509–535.
85. Charmaz, K. *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*; Sage: Thousand Oaks, CA, USA, 2006.
86. Charmaz, K. Constructionism and the grounded theory method. *Handb. Constr. Res.* **2008**, *1*, 397–412.
87. Charmaz, K.; Keller, R. A personal journey with grounded theory methodology. Kathy Charmaz in conversation with Reiner Keller. In *Forum: Qualitative Social Research*; 2016; Volume 17, Available online: <https://www.qualitative-research.net/index.php/fqs/article/view/2541> (accessed on 27 February 2021).
88. Charmaz, K.; Belgrave, L. Grounded theory. In *The Blackwell Encyclopedia of Sociology*; 2007; Available online: https://link.springer.com/referenceworkentry/10.1007%2F978-981-10-2779-6_84-1 (accessed on 27 February 2021).
89. Charmaz, K.; Belgrave, L. Qualitative interviewing and grounded theory analysis. *SAGE Handb. Interview Res. Complex. Craft* **2012**, *2*, 347–365.
90. Ferrarotti, F. *Storia e Storie di Vita*; Laterza: Roma-Bari, Italy, 1981.
91. Stake, R.E. Case studies. In *Handbook of Qualitative Research*; Denzin, N.K., Lincoln, Y.S., Eds.; Sage: London, UK, 1994; pp. 236–247.

92. Merriam, S.B. *Qualitative Research and Case Study Applications in Education*; Jossey-Bass: San Francisco, CA, USA, 1998.
93. Yin, R.K. *Case Study Research: Design and Methods*; Sage: Thousand Oaks, CA, USA, 2003.
94. Yin, R.K. Validity and generalization in future case study evaluations. *Evaluation* **2013**, *19*, 321–332. [[CrossRef](#)]
95. Willis, B. *The Advantages and Limitations of Single Case Study Analysis*; E-International Relations, 2014; Available online: <https://www.semanticscholar.org/paper/The-Advantages-and-Limitations-of-Single-Case-Study-Willis-Elman/b9cccbe8ec7f9a82d4e289ca5e10be2a1ef0433d> (accessed on 27 February 2021).
96. Anderson, P.A. Decision making by objection and the cuban missile crisis. *Adm. Sci. Q.* **1983**, *28*, 201–222. [[CrossRef](#)]
97. Pinfield, L.T. A field evaluation of perspectives on organizational decision making. *Adm. Sci. Q.* **1986**, *31*, 365–388. [[CrossRef](#)]
98. Bryman, A. *Social Research Methods*; Oxford University Press: Oxford, UK, 2012.
99. Kazdin, A.E. Single-Case Research Designs, Second Edition. *Child Fam. Behav. Ther.* **2012**, *34*, 76–79. [[CrossRef](#)]
100. Tate, R.; Perdices, M.; Rosenkoetter, U.; Mcdonald, S.; Togher, L.; Shadish, W.; Horner, R.; Kratochwill, T.; Barlow, D.; Kazdin, A.; et al. The Single-Case Reporting Guideline In BEhavioural Interventions (SCRIBE). Explanation and elaboration. *Arch. Sci. Psychol.* **2016**, *4*, 10–31.
101. Baer, D.M.; Wolf, M.M.; Risley, T.R. Some current dimensions of applied behavior analysis. *J. Appl. Behav. Anal.* **1968**, *1*, 91. [[CrossRef](#)]
102. Charmaz, K. *Constructing Grounded Theory*; Sage: Thousand Oaks, CA, USA, 2014.
103. Dodge, R.; Daly, A.P.; Huyton, J.; Sanders, L.D. The challenge of defining wellbeing. *Int. J. Wellbeing* **2012**, *2*, 222–235. [[CrossRef](#)]
104. Waterman, A.S. Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *J. Personal. Soc. Psychol.* **1993**, *64*, 678–691. [[CrossRef](#)]
105. Michaelson, J.; Abdallah, S.; Steuer, N.; Thompson, S.; Marks, N. *National Accounts of Well-Being: Bringing Real Wealth onto the Balance Sheet*; New Economics Foundation: London, UK, 2009.
106. Chandra, Y.; Shang, L. An RQDA-based constructivist methodology for qualitative research. *Qual. Mark. Res. An Int. J.* **2017**, *20*. [[CrossRef](#)]
107. Glaser, B.; Strauss, A. *The Discovery of Grounded Theory Strategies for Qualitative Research*; Sociology Press: Mill Valley, CA, USA, 1967.
108. Mahali, A.; Lynch, I.; Fadiji, A.W.; Tolla, T.; Khumalo, S.; Naicker, S. Networks of well-being in the global south: A critical review of current scholarship. *J. Dev. Soc.* **2018**, *34*, 373–400. [[CrossRef](#)]