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Review

Intergenerational Learning and Its Impact on the Improvement of Educational Processes

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Abstract: The promotion of intergenerational dialogue is postulated as one of the most frequently used strategies to promote meaningful learning. The objective is to analyze the impact of intergenerational dynamics on the learning process. To this end, this work is based on the methodology of a systematic review following the PRISMA method through the establishment of inclusion and exclusion criteria and analysis of their suitability. The priority indicator was to collect empirical experiences in the WOS and Scopus databases that implemented strategies on intergenerational learning and promoted improvements in learning, obtaining a total of 14 documents to be analyzed. The results of the review reaffirm the effectiveness of promoting dynamics of this type, observing positive outcomes in different sets of samples in six main areas: (1) attitudes, well-being, and happiness; (2) integration of vulnerable groups; (3) improvement of family relationships; (4) promotion of social and human values; (5) prevention of diseases and increased knowledge about health; and (6) combating the generational digital divide. There are also weaknesses associated with these experiences, such as the strong involvement required by the participants or the initial prejudices that exist between one generation and another.

Keywords: intergenerational learning; learning; systematic review

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1. Introduction

In today's society, where ICT (Information and Communication Technology) is widely used in various fields, the digital divide between different generations has become a significant challenge. According to the 2021 report by the European Commission, "the digital gap between younger and older age groups is wide and growing in many countries" [1]. Moreover, the COVID-19 pandemic has further exacerbated this divide, as many older individuals lack access to the necessary technology for working, studying, and socializing online.

Warschauer and Matuchniak argue that the digital divide is a matter of access, skills, and usage, and that public policies should address these three dimensions of the digital divide [2]. On the other hand, Van-Dijk and Hacker indicate that it is not only about access to technology but also about the skills and knowledge to use it [3]. Additionally, they point out that the digital divide is associated with social and economic inequality. A study conducted by the National Institute of Statistics (INE) in Spain indicates that the digital divide is also related to age. According to this study, 27.7% of people over 65 do not use the internet, compared to 5.6% of those under 65 [4]. This means that older people are at a disadvantage in accessing information, communication, and online opportunities.

Regarding current education, it is constantly evolving due to the changes that occur in the fluid society we live in. It is increasingly evident that lifelong learning is essential to face the challenges of today. Education expert Robinson argues that "education should not be seen as a linear process that ends when you leave school, but as a continuous journey" [5] (p. 10). This idea reinforces the importance of learning throughout life. Bauman points out that "we live in a liquid society where everything changes rapidly and nothing is secure" [6] (p. 63), implying that the skills and knowledge acquired in formal education can quickly become obsolete. In this context, education must be flexible and constantly adapt to changes in the environment.

On the other hand, Marina explains that "education can no longer be limited to the transmission of knowledge but must focus on the development of skills and competencies for learning to learn" [7] (p. 54). In this way, autonomous learning and the ability to adapt to changes that occur in society are fostered. Therefore, current education should be oriented towards lifelong learning, allowing individuals to adapt and thrive in a fluid and constantly changing society. Dewey emphasized education as the vital focus, the source of wisdom, experiences and learning, not so much as an instrument of help, but as the backbone of living [8].

In line with what has been mentioned, society is constantly changing, influenced by the use of technology. From this perspective, it is worth mentioning that there is a type of learning that can be developed across several generations, known as intergenerational learning. Intergenerational learning is a concept as old as humanity itself. It predates any form of formal education. Generally, it involves the informal transmission of knowledge, skills, and values within multigenerational households as part of everyday life [9]. Furthermore, Kaplan indicates that this type of learning is successful when it addresses the developmental needs of children and adults by age, is appropriate and reciprocal, and is based on the strengths and advantages of each generation [10]. In this way, intergenerational learning brings together common elements in the learning experiences of both the young and the elderly, moving away from a separate conceptualization of pedagogy, adult learning, and learning for the elderly [11].

Moreover, programs for the elderly linked to learning with children are increasing, so the engagement between different generations and the collaboration that occurs, although it is an innovative practice, can change the teaching–learning process [12]. Training programs have also been shown to have a positive impact on eliminating stereotypes of young adults in relation to ageing and older adults [13].

On the other hand, it is necessary to point out that there are different types of intergenerational learning programs, which can be organized depending on the intensity of the interaction. Thus, they are classified into the following levels [14]: Level 1: tasks that are carried out in the same physical space, but the interaction between generations is unintentional or not significant; Level 2: interaction that takes place in the same location, but it is generally unidirectional, as can happen when children visit a residence to perform a theatrical performance; Level 3: both older and younger individuals work equally on the same task, such as cooking for people in need of food and shelter; Level 4: the highest level of interaction, where a learning space is shared with the aim of achieving learning objectives for people of different ages.

In the research conducted by Cambero-Rivero and Rangel-Preciado, the focus is on knowledge transfer between people of different ages, both in family contexts and in intergenerational programs [15]. A survey was used to gather information about teaching concepts related to norms and life skills, as well as learning relationships among three generations within the household. Additionally, participant observation was conducted in municipal intergenerational programs. The results indicate that the main concepts learned by children from adults are related to ethics, morals, life experiences, environmental education, and sports. It was also found that children learn more from their parents, followed by grandparents and then siblings.

In another study by Chippendale and Boltz [16], the effects of the Living Legends program on the perception that health science students have of older adults and their interest in working with them were investigated. A quasi-experimental multisite control group design with a qualitative component was conducted, involving students from two universities and two community colleges, as well as older adults living in the community. Primary outcome measures, such as the Aging Stereotype Scale and Likert-style questions to measure interest in working with older adults, were used, and written responses to program experiences were also collected. The results indicate that the Living Legends program is effective in improving the positive image that health science students have of older adults and may have a positive impact on some students regarding their interest in working with them. The study also highlights qualitative themes that emerged from the written responses of the participants, such as positive and beneficial experiences, life lessons, seeing the person beyond the visible, the power of the written word, and shared lives.

Intergenerational learning can take place in a variety of settings, such as the family, formal education, work and society at large.

According to the scientific literature, its implications are of great interest, as it promotes the transfer of wisdom, fosters mutual understanding and contributes to social cohesion. Thus, in the family context, there are numerous studies and authors who highlight its importance, such as Harkness and Super, who have conducted research on socialization and learning in intergenerational family contexts, highlighting how cultural differences influence the transmission of knowledge [17]. Along the same lines, Simmons et al. in their study reveal the influence of family interaction on the construction of children's identity, their social and moral development and, above all, the benefits of the cultural variable in different family patterns and models for learning and teaching science [18].

In this area, it also points to the need to implement literacy programs for transnational families (Latina mothers context) such as those collected by Gonzales et al. [19], using workshop to promote learning in design, development of literacy skills, knowledge and experience through storytelling, as well as workshop, as investigated by Hébert et al. [20], in an urban school context with a rich and culturally diverse population, where a short digital story is created through technological resources, as a means of sharing experiences and knowledge, resulting in a greater cognitive background that helps and boosts the digital competence of their children. Another of the resources developed is the creation of eco-schools in Africa to promote intergenerational interaction on climate change from within the family [21].

Furthermore, awareness of the impact of the family environment as counter-spaces for minorities of young people where identities are affirmed and a decisive influence is exerted at a socio-cultural level, derived from the pandemic, are another relevant focus of study [22]. It is also worth noting the negative impact on socioemotional development, which can be generated by an excess of social comparisons within the family environment [23], along with other important variables to consider, such as those pointed out by Mulholland et al. [24], through migration and intergenerational conflict in South Australia, by the assimilation of different sex and gender norms from the country of origin and resettlement, providing guidelines on how to positively influence a two-way and inclusive communicative process.

At the educational level, some isolated studies are shown in terms of formal education, to a large extent, developed in different countries, educational levels and focused on different variables or factors. Thus, from a university perspective, there is very limited research, based on an intergenerational approach [25]. Also note worthy is the intergenerational approach in informal education, with qualitative studies on the oral transmission of traditional knowledge in rural and nomadic contexts, such as the study developed by Yembuu in Mongolia [26].

However, empirical evidence supports, on the one hand, the idea that intergenerational learning in this area can enrich the educational experience, promote empathy and prepare students for a diverse society. Thus, its positive impact on academic motivation at the

student level in the Florida College System has been noted [27]; in enhancing functional solidarity developed through interculturally supportive learning experiences between older people and young immigrants in a community project on ICT use in Sweden [28]; the effectiveness of a learning unit in a Hong Kong University, at an intergenerational level, especially from the mixed spatial distribution of the classroom, which allows for greater interaction between elders and young people and the possibility of increasing further enrichment [29]; the possibility of addressing issues of inequality and diversity in the classroom [30].

On the other hand, the reflection and assessment derived from training praxis at a prospective level should be noted, where the limitations in the creation of multigenerational classrooms are identified, that is, to establish lifelong learning at the university, from teacher training, cultural and attitudinal change [31]; educational innovation strategies are proposed to incorporate technological resources, such as Augmented Reality (AR), in intergenerational learning contexts, which have an impact on intergroup dynamization [32]; as well as, as Stanley et al. point out, the importance of guaranteeing the sustainability of different intergenerational play groups between older people, their carers and children, as the most effective strategies for their durability and, therefore, for their inter- and intra-group benefits [33].

Another area of study has been intergenerational learning in the workplace and society in general, where its positive influence has been reflected in a collaborative environment, skills development, contributing to growth and innovation [34–36], as well as fostering transformational leadership in organizations [37] and improving job satisfaction and performance [38].

Finally, in the literature, there are some systematic reviews that have addressed the developed topic [39,40]. On the other hand, Tsiloni et al. review focused on the importance of intergenerational learning and interaction for the development of skills, knowledge, and values in school-aged children and older adults [40]. The review was conducted following the PRISMA method and included both quantitative and qualitative data. Narrative synthesis was used as a framework for data analysis. The results suggest that most studies highlight improvements in attitudes, well-being, happiness, and other social and psychological aspects. However, the review also points out the methodological flaws in the included studies, indicating the need to be cautious when interpreting the results. Overall, it emphasizes the importance of intergenerational learning and its positive impact on the psychosocial well-being of the participants but also underscores the need for further research to better understand these effects and address the methodological shortcomings.

Based on this foundation and the identified topic, the objective is to analyze the impact of intergenerational dynamics on the learning process. In order to properly situate our study, the following characterization questions need to be asked first of all.

- What type of intergenerational learning publications is being conducted? In which countries has intergenerational learning been researched?
- What was the time period in which the publications took place?

To achieve this goal, the following research questions were established:

- What strategies were implemented for learning? What variables are addressed in intergenerational learning studies?
- What are the improvements resulting from intergenerational learning?

2. Materials and Methods

Regarding the nature of this study, a systematic review methodology has been advocated, following the principles of the PRISMA statement concerning eligibility (specification of the characteristics of the analyzed studies) and study selection (scrutiny process carried out).

The search took place during the first quarter of the year 2023, and all articles published up to that date were reviewed. The Web of Science (WoS) and Scopus databases were selected since they are the ones with the highest recognition due to the impact indexes they present, including Journal Citation Reports (JCR) and Scimago Journal & Country Rank (SJR).

2.1. Search Strategy and Inclusion and Exclusion Criteria

In the identification of the sample of articles (Table 1), the following search equation was used: ("intergenerational learning" OR "intergenerational knowledge management") AND (strategies OR resources OR programs OR activities).

Table 1. Search strategy.

WOS	SCOPUS
TS= "Intergenerational Learning" OR "Intergenerational Knowledge Management" OR "TIC") AND ("strategies")	Article Title, Abstract, Keywords = ("Intergenerational Learning" OR "Intergenerational Knowledge Management" OR "TIC") AND ("strategies")
Document Type = Open Access Article	Document Type = Open Access Article
Time Period = All years	Time Period = All years
Language of Documents = English and Spanish	Language of Documents = English and Spanish

Source: Own elaboration.

In the second instance, inclusion and exclusion criteria were established, narrowing down the sample of documents to articles. This decision was made because articles are typically published after undergoing peer review, ensuring a higher degree of scientific rigor. Table 2 outlines the criteria used in the study.

Table 2. Document selection criteria.

Inclusion Criteria (CI)	Exclusion Criteria (CE)
CI1. Articles.	CE1. Conference proceedings, book chapters, books, or other types of documents.
CI2. Open access publications.	CE2. Restricted access documents.
CI3. Documents in English or Spanish language.	CE3. Articles that are not in English or Spanish.
CI4. Intergenerational learning studies and learning strategies.	CE4. Duplicate articles.
CI5. Empirical studies.	CE5. Studies not focused on intergenerational learning.

Source: Own elaboration.

2.2. Data Collection

Taking Canedo-García et al.'s methodological strategy as a reference, two researchers were responsible for conducting the document review according to the established inclusion and exclusion criteria [39]. The screening process was carried out in three distinct phases, following the considerations of previous studies [41,42].

Firstly, the initial search for results was conducted in the WoS and Scopus databases based on the application of the search equation. In the second phase, inclusion and exclusion criteria related to document typology, availability for consultation, language, and study type were applied. Finally, in the third phase, each title and abstract of the articles were analyzed in detail based on the remaining inclusion and exclusion criteria (Figure 1).

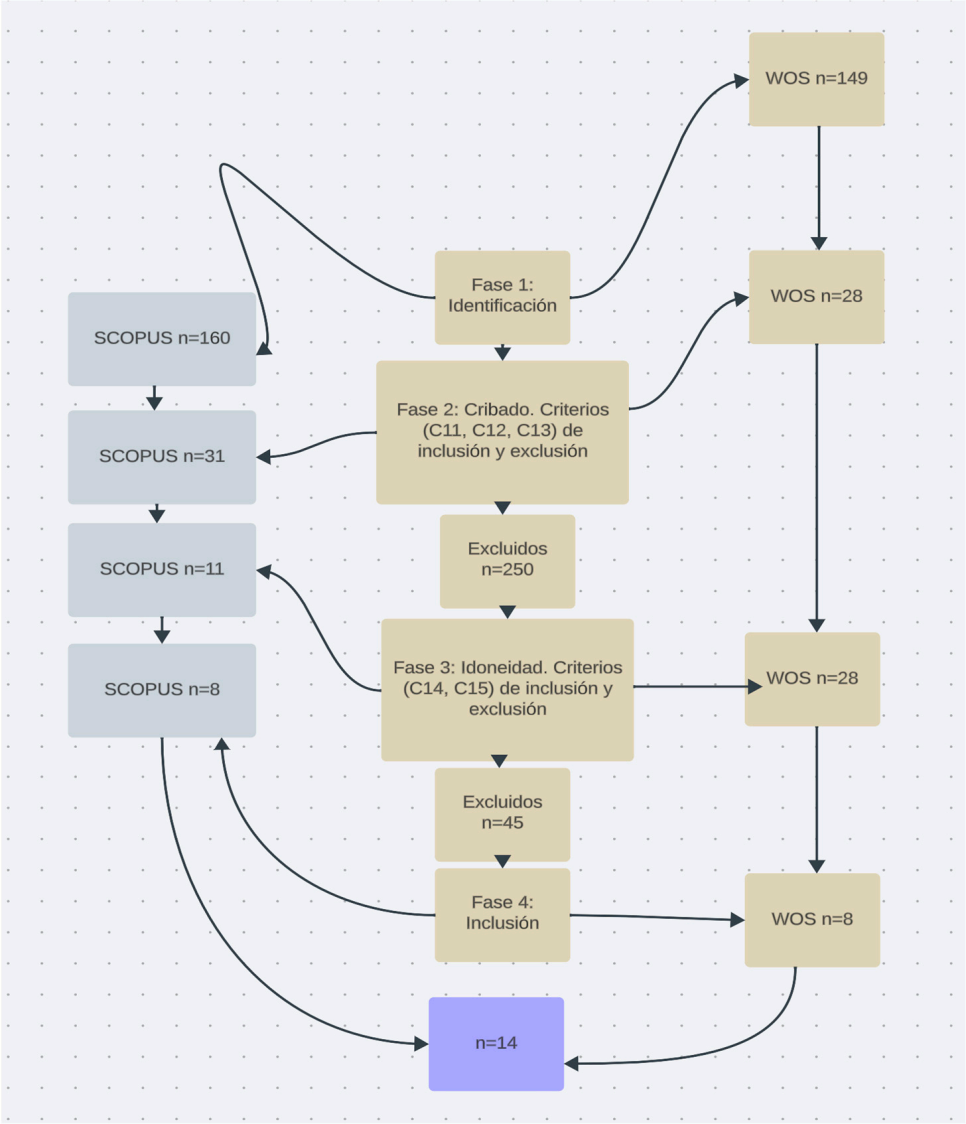

Figure 1. Flowchart. Source: Own elaboration.

3. Results

Regarding the publication periods (Figure 2), it can be observed that a significant portion of the articles published on intergenerational learning occurred during the year 2020, with a total of five publications, followed by the year 2016, which had a total of four publications. In the other years, there were two publications in 2014 and 2018, and the remaining years had only one article each.

Next, regarding the countries of origin of the papers (Figure 3), a wide variety is evident. The highest percentage of documents comes from the United States (four articles), followed by the United Kingdom, Australia, and China (two), and then by Poland, Austria, Italy, Brazil, Greece, France, and Bulgaria (one).

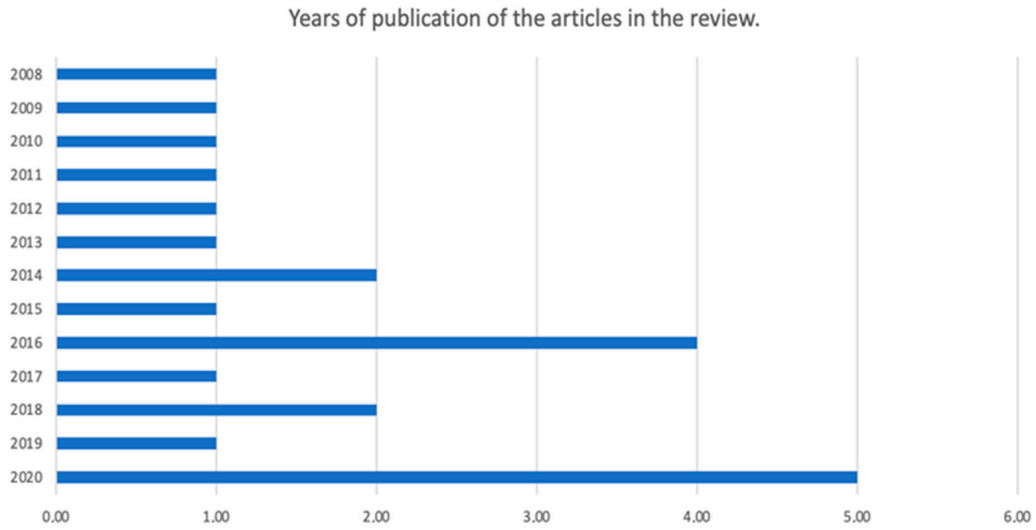

Figure 2. Years of publication of the articles in the review.

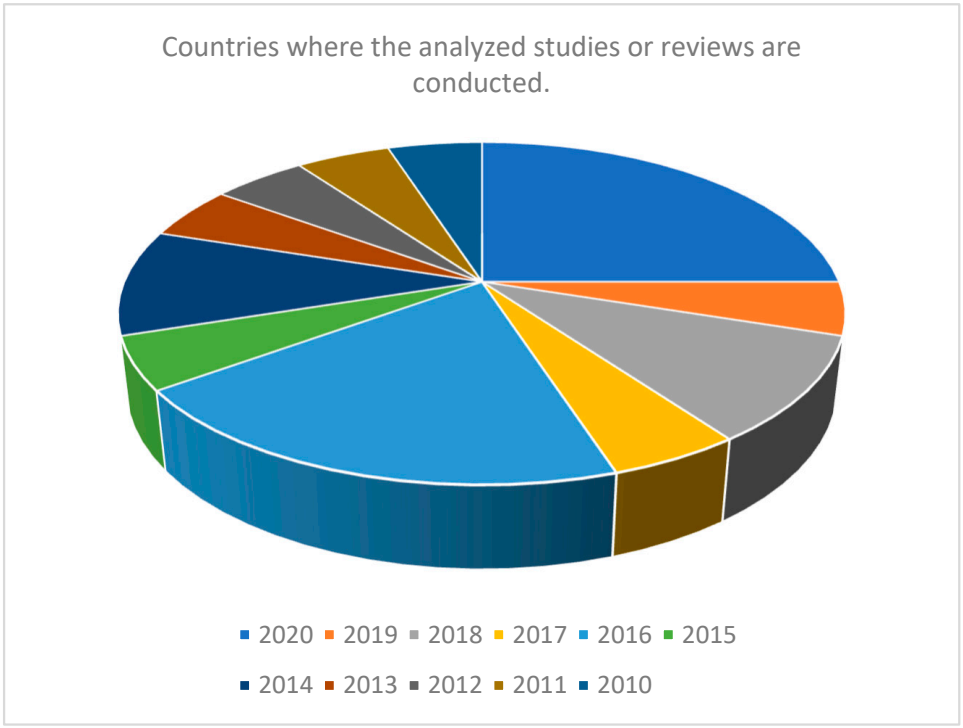

Figure 3. Countries where the analyzed studies or reviews are conducted.

Finally, Table 3 provides the papers that make up the review, the study variables analyzed, the implemented or addressed strategies, and the observed effects.

Thus, a large part of the studies are shown below [43–56].

Table 3. Characteristics of the analyzed papers.

Authors	Type of Publication	Countries	Journal	University	Years	Strategies Used	Study Variables	Improvements
Baran and Kłos [43]	Research article	Polonia	*Journal of International Studies*	Collegium Civitas Piła Academy of Business	2014	To possess technological competencies that are necessary to achieve success in the modern era Tutoring and coaching programs as a method for managing generational diversity Having knowledge about early learning and the game of the 'Framework of Belonging, Being, and Becoming	Inter-generational cooperation	This allows the development of basic competencies in new areas, especially focusing on the learning process, which results in the acquisition of new knowledge and skills, as well as introducing the principle of knowledge management.
Golenko et al . [44]	Research article	Australia	*Australasian journal on ageing*	Griffith University	2020	- Early Childhood Learning. - Community Development Strategies - Neuroscience based on a neurosequential model of education	Health, well-being, mood, level of commitment, and program satisfaction	Establish how an intergenerational learning program should be carried out.
Green et al. [45]	Research article	United States of America (Alaska)	*Society and Natural Resources*	University of Alaska Fairbanks Stanford University	2016–2018	Community Voice Method: Creating a movie to educate young people and foster intergenerational dialogue.	Values and knowledge	It achieves educating young people and fostering intergenerational dialogue, and initiating debates about the inclusion of indigenous values and knowledge in resource management.
Kenner et al. [46]	Research article	United Kingdom	*Journal of early childhood research*	University of London	2007	Skills of "scaffolding", the "synergy" that leads to mutual benefits for the young child and their caregiver, the "syncretization" of knowledge from different sources and the "funds of knowledge" within communities, and the transmission of knowledge or "prolepsis" between generations.	Touch	Synergy between grandparents and grandchildren to accomplish tasks.

Table 3. *Cont.*

Authors	Type of Publication	Countries	Journal	University	Years	Strategies Used	Study Variables	Improvements
Lyu et al. [47]	Research article	China	*International Review of Education*	East China Normal University	2020	Intergenerational Learning Project between grandparents and grandchildren (IL-GP & GC) during the COVID-19 stage to prevent pandemics, promote healthy habits, and foster information literacy	Gender and age	Both the older generation and the younger generation have acquired a greater amount of knowledge related to health, life skills, and values. The older generation has shifted their perspective on learning and behavior, while the younger generation has come to better understand their grandparents and has embraced the concept of lifelong learning. All of this has resulted in a close relationship between grandparents and grandchildren.
Mansilla et al. [48]	Research article	France	*Journal of Childhood Studies*	Sorbonne Paris Cité University	2019	Project COMMIC = implementation of several workshops where children aged 8 to 12 and individuals over 65 designed a video game using Bloxels Builder (BB), a computer application for tablets based on the identification of color and position of small plastic cubes on a large plastic board.	Game design	It promotes collaboration between different generations and fosters community participation in intergenerational programs.
Marchezini et al. [49]	Research article	Brazil	*International Journal of Disaster Risk Science*	National Early Warning and Monitoring Center of Natural Disasters	2014–2016	Workshops within the participatory educational project of citizen science that involved high school students, teachers, and civil defense teams, with the aim of gaining knowledge about people-centered early warning systems (EWS) at the national level.	Dangerous situations	Measures are being developed that can be taken to reduce institutional vulnerability.

Table 3. *Cont.*

Authors	Type of Publication	Countries	Journal	University	Years	Strategies Used	Study Variables	Improvements
Mitrofanenko et al. [50]	Research article	Bulgaria, Greece and Italy	*Mountain Research and Development*	University of Natural Resources and Life Sciences	2015	The "Big Foot Project" and programs like the "Inter-generational Outdoor School" and "Intergenerational Autonomous Learning" aim to enable young individuals to learn from older generations about aspects of caring for and preserving the natural environment.	Management of protected natural areas	The interaction between different generations fosters a perception from both groups towards the natural environment. Likewise, it shapes a community that increases its affection towards the natural environment.
Ni et al. [51]	Research article	China	*International Journal of Environmental Research and Public Health*	China University of Mining and Technology	2019–2020	Establishing effective communication channels, knowledge-sharing platforms, and incentive mechanisms to create a favorable culture of safety knowledge.	Safe behavior, job satisfaction; knowledge exchange among different members of the company	The communicative exchange between generations fosters job satisfaction. Moreover, it is positively related to the compliance behavior with safety norms.
Parth et al. [52]	Research article	Austria	*Sustainability*	University of Innsbruck	2020	The Climate Change Education (CCE) program "kidZ21" involving high school students with children and their parents.	Knowledge transfer from young individuals to parents regarding the CCE program.	Intergenerational practice improved parents' understanding of the topic, as well as parent–child relationships. Additionally, positive effects were observed in the frequency and quality of communication about climate change, and a clear shift towards climate-respectful attitudes or actions.
Passey [53]	Research article	United Kingdom	*Education and Information Technologies*	Lancaster University	2011	The Digital Leader Project for students was launched by the Wolverhampton Local Education Partnership (LEP), aiming to develop a variety of skills and outcomes for both the digital leaders and a potentially wider range of staff within schools. The digital leaders were children aged 11–14 years.	The digital leaders acquired technological skills, social abilities, and work-related competencies.	The digital leader initiative was positive. By directly engaging with teachers, principals, and peers, they acquired multiple digital knowledge and skills. Furthermore, they improved their communication, evaluation, and teamwork skills, among others.

Table 3. *Cont.*

Authors	Type of Publication	Countries	Journal	University	Years	Strategies Used	Study Variables	Improvements
Peppler et al. [54]	Research article	United States of America	*Education Sciences*	University of California	2020	The Maker Movement and 'Making' involve creating practices to achieve interdisciplinary learning. Intergenerational learning is promoted through maker practices, which may include activities such as crafting, ceramics, painting, etc.	"Maker learning" and attitudes towards these practices.	Intergenerational learning provided empowerment opportunities for young individuals from vulnerable backgrounds to gain more knowledge about maker practices.
Senteio [55]	Research article	United States of America	*Geriatrics* (Switzerland)	Rutgers University	2016	Developing patience and providing opportunities for the elderly to perform tasks themselves are fundamental learning strategies to learn how to use technology.	Self-efficacy regarding intergenerational learning about health and technology knowledge.	The use of mobile phones, downloading applications related to health education (nutrition to access more information about diabetes), not only improved the technological knowledge of the elderly but also enhanced intergenerational relationships and their knowledge about health.
Smith et al. [56]	Research article	Australia	*Frontiers in Public Health*	University of South Australia University of New South Wales Flinders University	2018	Programs, videos, and activity notebooks about knowledge of dementia in older adults. Contact with older adults through an intergenerational experience.	Knowledge and attitudes about dementia.	The program was highly effective. There was a positive change in the children's knowledge and attitudes about dementia, as well as an improvement in empathy.

Source: Own elaboration.

4. Discussion

Intergenerational learning is elucidated as a powerful strategy to promote learning processes of various kinds. The elaboration of this research confirms the positive impact that previous studies have been asserting about the application of this type of strategy in different samples of subjects [39,40]. In conclusion, the elaboration of this paper has allowed for the compilation of relevant experiences that share a common assertion: promoting the dynamics of work based on intergenerational learning fosters the development of learning of a multifaceted nature.

In this regard, the results of this review allow us to frame the reviewed studies around six lines of action in which it can be affirmed that intergenerational learning has promoted observable improvements.

1. Attitudes, well-being, and happiness: As previous studies indicated [40], intergenerational learning fostered improvements in attitudes, well-being, and social and psychological aspects. Thus, the results of this paper align with these findings, which also include additional discoveries such as the improved empathy of young individuals towards older adults [56], better dialogue skills [45], enhanced ability to work together on tasks [46], and a better understanding of each generation [43], resulting in an increased sense of well-being.
2. Integration of vulnerable groups: The results allude to the significant role that intergenerational learning plays in the social integration of disadvantaged groups [49], where the interaction between people of different age groups promotes social integration. At the same time, it serves as an important preventive measure against mental illnesses, drug use, or other similar situations [54]. In this sense, this contribution is considered highly valuable, as this type of dynamic could lead numerous programs aimed at promoting social integration.
3. Family relationship improvement: According to the evaluated studies, the dynamics implemented in the research have favored the improvement of family relationships, such as parent–child relationships [52] or grandparent–grandchild relationships [46], as well as collaboration among family members to perform tasks together.
4. Promotion of social and human values: The analysis of the conducted studies confirms this statement, in which not only the collaborative work between young and older individuals has been promoted but also the improvement of knowledge about social values, such as environmental care and the fight against climate change, among others [50,52].
5. Prevention of diseases and increase in health knowledge: As indicated by Senteio [55] and Smith et al. [56], the intergenerational contact promoted knowledge in terms of disease prevention, while also improving intergenerational relationships [47]. In this sense, there are many elderly individuals who require information and healthcare assistance, and intergenerational learning-based initiatives present a great opportunity to continue addressing this situation. This scenario is further accentuated in a context where practically all information is digitized, and there is an increasing number of technological devices and digital applications that dominate medical care.
6. Combatting the digital divide: The number of studies advocating for the implementation of intergenerational learning, where young people introduce older individuals to technology-related concepts, as mentioned in the previous section, is increasing. The results of this review indicate that the effects on the elderly are very positive [53]. In this way, it is proposed as a great opportunity to continue digital literacy training for the population, addressing the current digital divide that exists between generations.

Therefore, these lines of action elucidated after the systematic review lead us to observe how contact between different generations promotes numerous learning processes. Furthermore, the experiences studied take place in different environments and contexts, which makes us reflect on the potential of this type of dynamics and strategies [17]. In these experiences, we can observe how lifelong learning increases in older generations, as

well as curiosity and discovery for young people. This fosters reversibility in teaching and learning roles between the different participants of the experiences [32].

In the same way, life history becomes a great resource for young people's learning, providing them not only with knowledge about socio-professional aspects, but also with useful personal knowledge [31]. On the other hand, the contact of young people with older generations not only fosters interesting learning about technologies and the digital world, but also combats the loneliness in which older generations can find themselves [47].

On the other hand, it is also necessary to highlight some weaknesses found in the studies on the implementation of this type of dynamics. Among them, on occasions, there is not a high degree of attention among the participants to learn from the other participants. This is more common among younger participants than among older generations. In addition, the development of this type of dynamics requires a high level of commitment from the participants, which sometimes does not occur. Finally, there may also be certain initial prejudices or misgivings between the different generations, which are gradually diluted as the dynamics develop.

Therefore, the proposed review shows that the implementation of strategies based on intergenerational learning can promote improvements in different transversal learning. Although it is true that the study of the 14 documents presented in this work is not enough to be able to make solid statements about their effectiveness, it does allow us to make an argument in favor of this type of practice and the benefits it promotes.

5. Conclusions

Intergenerational learning is proposed as an important alternative to continue promoting effective teaching and learning processes in both formal and non-formal contexts. This work reaffirms the need to promote joint learning experiences, where all generations actively participate to foster a greater mutual enrichment. Therefore, this paper contributes in this regard by providing experiences from different perspectives in which its effectiveness has been proven.

Although this study does not have an extensive sample of documents that would allow us to rigorously confirm the effectiveness of this type of learning strategy, it does allow us to show the importance and benefits of this type of experience in different types of contexts. It is a cross-cutting strategy common to any type of learning context or scenario. Therefore, this study is relevant in order to further expand the existing theoretical framework around intergenerational learning and the promotion of apprenticeships.

According to the limitations found, it is considered that this study could have been extended to cover a larger number of articles if the researchers had included more participating databases in the study. The same limitation applies if they had expanded the inclusion criteria to include other types of scientific documents. However, the research team advocated for peer review as the fundamental basis for scrutinizing the study sample. As future lines of research, this investigation can be extended to address multiple horizons, such as developing intergenerational learning programs to promote different skills, attitudes, or competencies. Additionally, further analysis through experimental or quasi-experimental studies can be conducted to consolidate the claims made in the works that constitute this line of research and to better understand the impact of intergenerational learning. Finally, the development of a meta-analysis to determine the effect of this type of practice on the learning of the participants involved would be useful.

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