

Article

Promoting Social Skills among Generation Alpha Learners with Special Needs

Heidi Flavian 

Faculty of Education and Leadership, Achva Academic College, Shikmim 79800, Israel; heidif@achva.ac.il

Abstract: Since digital learning and communication tools are ubiquitous, educators no longer need to teach Generation Alpha (GA) learners how to approach and use them. Nevertheless, while digital tools provide numerous advantages, researchers claim that the development of social skills is challenging for GA learners, given their lack of social experiences and interactions. These challenges are greater among learners with special needs (SNs). This study examines teachers' attitudes toward the integration of digital tools promoting social skills among GA learners with SNs, rather than focusing on academic skills. Twenty-one semi-structured interviews underwent qualitative analysis. Participants emphasized both the advantages and challenges of using digital tools and shared their perspectives regarding the possible effective use of these tools among learners with SNs.

Keywords: Generation Alpha; learners with special needs; social-skills; digital environment; teacher-training

1. Introduction

The accelerated development of technology throughout all areas of life, together with children's exposure from an early age to various technological tools have affected the characteristics of learners born after 2010 who are defined as Generation Alpha (GA) [1]. There is no doubt that while such tools provide access to a wide range of knowledge sources, learners must still develop thinking skills and acquire basic academic skills in order to make effective use of the available information. However, this requires adapted teaching methods that can contribute to cognitive advancement and critical thinking to enable GA members to become truly independent learners. Moreover, technology has also changed social communication in a way that is significantly affecting the development of these learners' social skills [2,3].

Like all other areas of our lives, the expansion of technological possibilities has affected education, requiring the use of new teaching approaches that integrate relevant technological tools. Despite the challenges teachers deal with while keeping up with evolving educational technologies, adapting them to learning processes, and improving social skills that are sometimes impaired due to the use of technology, integrating technologies in education has the potential to significantly improve the learning experience for all learners, and it creates wonderful opportunities alongside the challenges, especially for learners with SNs [3,4]. For example, providing tailored support while increasing access to educational materials and promoting social integration are the main areas in which technology particularly contributes [5,6]. Moreover, the motivation to develop innovative technology that promotes learning opportunities also led to the development of assistive technologies that allow learners with SNs to learn despite their challenges. For instance, technologies that transform from Braille to word-type and back for learners with vision impairments, or from written texts to audio-recording and text-to-speech apps for those with hearing impairments [7]. Nevertheless, it should be remembered that one of the goals of the education system is to promote the inclusion of learners with SNs into the school system and into society [8,9]. Consequently, not only must educators learn how to integrate



Citation: Flavian, H. Promoting Social Skills among Generation Alpha Learners with Special Needs. *Educ. Sci.* **2024**, *14*, 619. <https://doi.org/10.3390/educsci14060619>

Academic Editor: Gila Cohen Zilka

Received: 15 April 2024

Revised: 18 May 2024

Accepted: 4 June 2024

Published: 8 June 2024



Copyright: © 2024 by the author. 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/>).

digital tools that promote efficient differential learning, but they must also make sure they use appropriately relevant technological tools to ensure that all learners develop the social skills that will promote their integration and inclusion in the future.

2. Theoretical Background

2.1. Main Characteristics of Generation Alpha (GA)

Generation Alpha (GA) is a concept referring to all children and adolescents born since 2010, when the significant acceleration in technology development began, thereby exposing them from the moment they are born to various digital tools [1,10]. Natural exposure cannot and should not be stopped, but its effects on children's development must be understood in various contexts and prepared for in education and other systems [11].

GA learners are born into an era in which the ongoing rapid development of all types of technologies in all areas of life impacts how people now consider knowledge to be a free commodity to which they can apply skills, concepts, and understandings [2]. Technology is evidently helping the world evolve, and its contributions and education are no exception in this regard. This generation will naturally embrace the innovation, progressiveness, and advancement of technology [12]. However, they will also need to acquire core thinking skills and learning strategies, based on their varied learning styles, perceptions, and expectations regarding education.

From another perspective, GA learners, who were born into the world of social networks through which they create social connections without physical proximity and the need for eye contact, develop ways of communication that differ from those we are familiar with. While they supposedly communicate with many people online for many hours a day, several researchers note that they often struggle when it comes to understanding body language and the meaning of the emotions expressed by others, and they encounter challenges in peer learning and teamwork, and more [13]. On the other hand, their access to many varied sources of information allows them a broad global vision, which can contribute to a broad understanding of dilemmas in various fields.

There is no doubt that the development of technology in recent years has brought about a real revolution in all areas of life, and therefore the various influences in the education system must also be addressed. While these technological changes challenge traditional teaching and learning practices, they also allow for diversity in teaching processes, in integrating learning content, and in performing tasks [2,14].

2.2. School Challenges among GA Learners

Acknowledging that the educational environment needs to continue to undergo a metamorphosis according to learners' cognitive, social, and emotional needs, future pedagogical and didactic methodologies should also be developed based on those changes, taking into account the new abilities of GA learners to gather information from many new sources. Moreover, given the accelerated technological evolution, one of the primary challenges faced by educators worldwide is to develop adaptable teaching methodologies that cater to the learning needs and preferences of GA learners [15]. One method that is implemented in many schools worldwide is the use of Information and Communication Technology (ICT) centers in schools [12,16]. From another perspective, growing up in a digital age, GA learners have brought all educators unique challenges, opportunities, and obstacles, as expressed in three main parameters. First, GA learners, who are accustomed to content connectivity and instant access to information, lack opportunities to develop essential learning strategies and thinking skills required to become independent learners. Additionally, teachers of GA learners must incorporate a variety of interactive digital tools, multimedia resources, and online platforms that are often updated, in order to remain relevant to their learners' world and enrich their learning opportunities [14]. From a different viewpoint, as some researchers claim [17], while digital tools and social media promote easy access to information, their prevalence in the lives of GA learners is a distraction that is potentially detrimental to their academic performance. Therefore, educators should look

for innovative ways to maintain learners' focus and motivate them to sustain their interest in a specific educational domain. While aiming to promote efficient learning, teachers should acknowledge GA learners' need for dynamic and varied instructional approaches that capture their attention and promote active participation.

To deal with both the academic and social challenges GA learners experience, researchers suggest balancing the integration of technology throughout teaching, both at school and at home.

2.3. GA Learners and Learning Strategies

Clearly, educators should integrate digital tools into their teaching [18]. Paradoxically, although GA learners are exposed to technical tools from an early age, allowing them to encounter new knowledge easily on a daily basis, they still often struggle to become effective independent learners [19]. Consequently, while learners are usually taught how to apply relevant learning strategies, nowadays teachers should impart innovative learning strategies based on their understanding of the unique challenges these learners face. For example, GA learners must be taught how to organize and integrate the large amounts of information that is so readily accessible in accordance with a defined learning goal. Teachers may begin doing so by integrating multimedia sources, educational apps, and online platforms, along with promoting engagement and providing personalized learning experiences tailored to each learner's pace and style [7,20]. Additionally, K-12 teachers have reported that while integrating technology and online teaching, they must have a flexible curriculum and be able to focus more on thinking skills, creativity, the social skills that promote fruitful collaborative work, and mainly to develop their learners' critical thinking [21–23].

2.4. Social and Academic Inclusion of GA Learners with SNs

Inclusion of learners with SNs is one of the main goals educators have been sharing worldwide in the past three decades while struggling with the same dilemmas and challenges regarding the efficient methods they should use to promote inclusion [24]. Nevertheless, it is essential to understand that not every learner who struggles in school is defined as a learner with SNs. Nowadays, when using the term *learners with SNs*, educators refer to those assessed and diagnosed with specific disabilities that are mentioned in official diagnostic assessments [25] and thus need to receive professional support in order to study in schools [7]. The inclusion of GA learners with SNs brings additional challenges because teachers are expected to also incorporate technology tools, such as some assistive technologies, that can enhance learning among all their GA learners, according to their cognitive, emotional, or other needs [26]. However, there is no difference between the diagnosis of GA learners with SNs and other learners with SNs who were born before the GA era, given the criteria according to which they are diagnosed [25]. Therefore, teachers should continually focus on strategies that will allow learners to cope with their disabilities. Nevertheless, educators base their teaching on the fact that they teach GA learners with SNs and thus look for technology support. While educators aim to promote learners' academic skills, there is almost no reference to the varied ways these technologies may also be used to promote learners' social skills [7], which are no less important for the learners' future as adults than their academic skills. Moreover, educators scarcely refer to the possible ways GA learners with SNs might use technologies to develop their social skills outside the classroom. This is despite the international rise in the promotion of the inclusion of learners with SNs that prevents them from earning a living without proper intervention [24].

It is important to emphasize that inclusion of learners with SNs, rather than mere physical integration, refers to the continuing overall responses educators provide to cater to the diverse needs of all learners in terms of their cognitive, emotional, social, or other special learning needs, to facilitate their inclusion in society as adults [27]. Regarding GA learners with SNs, one frequently recurring conclusion is that as reality and technology constantly change, educators should teach relevant content and skills that can promote

their future independence as adult learners [23,28]. Social skills are behavior components that are usually acquired through a variety of social experiences. When automatic learning is not evolved, specific interventions must be implemented. The core social skills educators and scholars usually refer to are those that evolved from the norms expected in schools, such as listening, communicating and cooperating with others, self-control, maintaining eye contact when needed, participating in peer learning, and behaving according to rules [29,30]. Social skills create successful relationships with others and promote efficient adjustment to different settings in school and other events in life. Although social skills may differ from one culture to another, a person with well-developed social skills may efficiently integrate into different cultures [7].

Integration of technology in education systems along with assistive technology that promotes the inclusion of learners with SNs creates opportunities to improve the learning experience by providing tailored support, increasing access to educational materials, and promoting social inclusion [16]. Over the last decade, distance learning and e-learning have become more widespread and thus the development of academic curricula for learners with SNs who must study using these methods develop dynamically [31]. Assistive technologies, such as screen readers, speech-to-text software, and alternative input devices, can give learners with various disabilities access to peer group material and enable fuller participation in class activities [14,32]. For example, for learners with a writing disability, typing on a tablet or computer may bypass their difficulty and improve their self-image. To promote social interaction, collaboration, dialogue, and participation in digital learning communities can be promoted. This can lower barriers to social interaction, making it easier to connect with classmates and the immediate environment. But, with all the advantages of these technologies, it should be noted that all this depends on accessibility, proper adaptation to technological functions, and relevant teacher training [5].

Following the above, teaching in inclusive environments obliges the use of teaching and learning strategies that promote the development of both academic and social skills alongside the promotion of inclusion. Moreover, by integrating updated technology-based collaborative learning methods such as group projects, peer teaching and learning, cooperative problem-solving activities, and promotion of critical thinking, the efficiency of both learning and inclusion will be improved. Nevertheless, very few studies on the efficient use of digital tools that are not specific assistive technologies among learners with SNs have been conducted [33].

Whereas there are studies considering the ways assistive technologies promote academic achievements among GA learners with SNs, this study aims to learn about teachers' attitudes towards the opportunities they may have to improve social skills among GA learners with SNs, while integrating the digital educational tools they use with all learners in order to enhance their inclusion.

3. Methodology

Research Goal, Questions, and Methods

The main goal of the study was to better understand the methods teachers may use to integrate technology and digital tools to promote the social inclusion of their GA learners diagnosed with disabilities and SNs. Additionally, the study sought to learn about teachers' perceptions regarding the advantages and challenges of integrating digital tools among GA learners with SNs. To achieve these goals, the study focused on three main questions:

1. How can teachers use digital tools to promote the social inclusion of GA learners with SNs?
2. How can teachers develop individual intervention programs that promote the social inclusion of GA learners with SNs?
3. What challenges do teachers face while integrating digital tools promoting the social inclusion of GA learners with SNs?

Participants in the study were 21 elementary school teachers, all of whom were trained to teach mainly reading, writing, and social studies for learners with a variety of SNs who

study in special education programs or in inclusive schools. They were also trained to teach in mainstream schools. They were all female, and their teaching seniority ranged from 3 to 16 years. During the period of the study, all teachers taught in mainstream elementary schools, in classes that included learners with Autism Spectrum Disorders (ASD), emotional difficulties, or any other communication deficiency. Participants reported that their basic knowledge and experience regarding the use of educational technology tools were developed in workshops they attended after they became teachers and from informal experiences they had initiated.

The data were collected through 21 individual semi-structured interviews that were recorded and immediately transcribed. Each interview lasted between 30 and 55 min. The core interview questions referred to teachers' knowledge and experiences in using digital educational tools, their understanding of the differences between academic inclusion and social inclusion, and their recommendations for efficient social inclusion based on the use of digital tools. Data analysis was conducted separately in three stages by three different people to maintain the trustworthiness of the findings and create relevant themes. First, each one carefully read the transcriptions and highlighted the main themes that evolved from the interview questions. Then, they looked for key repeated concepts and ideas that emerged while conducting the content analysis. In the final stage, they discussed the results together in order to determine the final themes. Accordingly, the findings were organized as presented in the next section.

4. Results

Following the goals of the study and the main research questions, five themes were defined, each of which revealed a different perspective.

4.1. *The Potential Contribution of Technological Tools to the Development of Social Skills While Helping to Integrate Children with Special Needs into a Heterogeneous Learning Environment*

Digital learning that incorporates technological tools is now seen as essential for supporting conventional learning methods. Dimitriadou and Lanitis [10], for example, emphasize that e-learning platforms have several advantages, including fostering student-centered learning and making students more independent learners. The study participants mention the contribution of digital tools to the learning of students with SNs integrated into heterogeneous classrooms from two perspectives: improving social skills and developing independent learning skills. Through the interviews, all participants expressed their honest support of integrating digital tools in inclusive environments, claiming that they may be used by everyone. One quotation representing all the responses on this matter was:

... this is so important... all learners know about technology... why not integrate as much as possible so learning and inclusion will be promoted?... learners with SN sometimes know about these digital tools more than others and they can teach us.

4.2. *Improving Social Skills*

Participants emphasized the importance of improving social abilities and coping with social challenges in class as processes that can benefit from the use of technological means. While half the participants shared that they see technology as more educational and less social, overall, they all expressed positive attitudes towards using technological tools in their lessons. Prominent social aspects in their responses were the use of learning-focused tools in order to generate classroom discourse and develop collaboration among students, and that this is something new and different that the world uses and therefore also has a place at school. One participant expressed this by saying:

... And that encourages them to work and be active. I see how sometimes the children play games on their tablets together with the speech therapist. She gives it to them as a bonus after working with her and they are mesmerized, they are just waiting for it. So if we integrate the tablet in order to improve social skills, that seems excellent to me.

One-third of the participants indicated a change in social skills as a result of intervention with technological tools in class. They addressed the ability to develop dialogue, peer learning, respect, and collaboration. However, one participant emphasized the educational and communication aspect, language expansion, and acquisition of concepts as benefits of technology use, without which it is impossible to promote social skills. According to two other participants, tailored technological tools should be incorporated in order to teach *“social skills like waiting in line, or approaching and asking a friend for help”*. An attitude repeated throughout the interviews was the importance of integrating technological tools to develop and strengthen social ties and skills. The participants' claims regarding the need to use technology to strengthen social skills that contribute to the integration of students with SNs were expressed in statements such as: *“What matters to me is that they work as a team”*; *“It's very important to me that students help each other, it empowers the students who are more advanced when they help a friend who is struggling”*; *“Sometimes they don't notice how cooperative or uncooperative they are, so even if I emphasized only the learning aspect in that lesson, when I incorporate technology it's really a matter of waiting their turn, patience, cooperation, knowing how to get help from a friend”*.

Regarding the relationship between the use of technological tools and the advancement of social skills of learners with SNs, half of the participants indicated they use teaching academic skills (such as reading and arithmetic) as a basis for promoting social skills. Of the 21 participants, 17 said they use technological tools such as laptops and desktop computers, a dynamic classroom, and sometimes 3D glasses and a projector that projects games on the floor to encourage movement and social communication among the learners. All this is done using apps, videos, thinking games, and other games.

The participants also explained that in addition to regular group work in class that promotes important collaborative learning, when using technological tools, interpersonal encounters can also be scheduled that cannot take place without the technological tools due to the students' various difficulties.

Another perspective relates to social skills and inclusion but in reference to the communication between teachers and learners. The participants claimed that technological tools help them convey social messages. Most participants said they use technology to improve their life skills by showing videos demonstrating different social situations and holding a dialogue after the viewing. Some participants even shared that with the help of various technologies, they photograph the students themselves in social situations and in this way promote the students' abilities to reflect on their own behaviors and that of their peers, learn what to improve and change, how to praise a friend, and they especially learn to do so in a way that respects all the learners in the class.

4.3. Developing Independent Learning Skills

Learning the proper use of technology can help develop personal abilities and learning independence that is important when integrating students with SNs into heterogeneous classes. This involves adaptation to the learner's personal pace [31]. All the participants emphasized that today's learners must be transformed into independent, researching, and critical learners. The study participants noted that they teach the students how to use social networks and technological tools for their personal advancement in learning while applying problem-solving. One participant explained:

“The students access the information themselves through search engines such as Google, both on their phones and on their computers. But they need to be taught how to use the right information to learn and to create safe social relationships”.

Another participant explained:

Today's children learn visually and at a different pace . . . They must be taught how to use technology so that they can be effective learners and not just waste their time. . . Everyone can, even those with cognitive or emotional difficulties.

In addition, some participants explained that with simple technological support such as headphones, one can impart independent learning skills while understanding the different needs of the learners; whether it is the need to erase ambient noise in order to learn, or not disturbing one another. Other examples participants shared related to technologies that assist in reading, thereby contributing to the learner's independence while integrating into the learners' society, or technologies that convert voice to writing and enable students who have difficulty writing to express their knowledge independently.

Other examples presented during the interviews linked the use of social networks and telephone communication (such as WhatsApp) to independent learning while socializing with classmates. Using these channels, students share thoughts and ideas and ask questions. When it comes to an academically heterogeneous class, we can find children who do not know how to read and have difficulty with free writing. Through WhatsApp, they are given the opportunity to record messages and thus be an equal member of the group. Conversely, the other children in the class are considerate and record messages so that everyone understands and thus learns to see the others and their different needs.

4.4. Developing Individual Study Plans Based on Technological Tools and Adapting Them to the Different and Changing Needs of Integrated Students

As presented in the literature review, in recent years advanced technologies have become an inseparable part of daily life and more significant in education systems. Hence, there is growing demand that schools use ICT centers to impart skills and knowledge that students need in the digital era. In a teaching–learning environment, digital tools (such as editing apps, search engines, etc.) provide teachers and students alike with more opportunities to work better and promote learning in various areas, whether in a classroom setting, in school administration, online teaching, or other learning activities [12,16].

The interviews in the current study revealed that all participants saw the importance of developing individual study plans and adapting them to the students' needs using advanced technologies that would also help them integrate into society in the future. They shared that they develop and integrate digital tools while teaching strategies tailored to each learner according to their strengths and challenges. This approach is well expressed in the following words:

“The class is heterogeneous and therefore everyone has their own academic level; the need is primarily differential for each one and his level according to his needs, there should be more individual work, mediation by the teaching assistant. . . Differential learning, mediation during breaks and lessons, learning in quiet places because of the attention and concentration spans of diagnosed students. It's that and adapting the content and conveying it experientially”.

With specific reference to academic learning, the teachers presented how they use technological tools to integrate games to motivate learners with learning disorders:

Children with learning disabilities have a harder time and lose motivation. . . So we can give them all kinds of tasks like in the areas of language, arithmetic, and other basic learning skills. . . They can just put all the games on the iPad and the kids get some kind of reward or reinforcement for proper behavior. As far as I'm concerned, they actually do tasks, progress and move from one level to another.

Thus, the teacher can adapt tasks to the student's personal curriculum in real-time and according to the changing needs of the day. Moreover, even in group work, each student can be given a learning task that suits their abilities and allows them to contribute their part to the group effort.

In addition to adapting the various technological tools to the teaching methods and the students' needs, 15 participants noted that they also use technological tools to promote personal life skills while teaching a heterogeneous class to promote inclusion. For example, learning ways to approach a classmate, coping with delayed gratification, demonstrating a response that matches the situation, and more. Two participants emphasized that students

who usually struggle are more likely to succeed because technological tools involve several senses, and each student can stand out where they are strong.

Another point of view, noted by most participants, relates to the personal tendencies of the learners. One participant concisely represented the other participants saying:

Beyond the special needs of integrated students, all students in the class have preferred teaching methods that are uniquely effective for each learner. The digital tools allow us to offer everyone different means of learning so that the students with special needs do not feel different.

One important emphasis that participants mentioned is that effective learning requires clear communication between learners and teachers. According to the participants, the ability to communicate promotes learning while improving self-image and communication with peers: “Students who have communication difficulties, who are suddenly given these technological crutches, so uh. . . It’s amazing”, said one participant, while another added:

The technological tools allow the teachers to understand what the children’s communication intention is. Have an effective dialogue with them. . . Social discourse. . . In this way, we can reduce the sense of frustration of all learners and teachers.

4.5. Various Challenges Arising from the Use of Technological Tools in the Classroom, Both among Educators and Students, and Possible Solutions for Implementation

Beyond the many advantages of integrating technologies in education to promote the integration of learners with SNs, there are also challenges that emerged from the analysis of the interviews. The challenges can be divided into those related to teacher training and those related to the conditions of the learning environment.

4.5.1. Challenges Related to Teacher Training

Most of the challenges noted by the participants in the context of their role in incorporating technologies to promote the integration of students with SNs relate to personal barriers, such as resistance to change, lack of technological knowledge, and the complexity of integrating technology use in class. One participant expressed this by saying, “I understand the importance of teaching with advanced technologies, but I really don’t relate to it”. Others expressed frustration with the lack of training for teaching through technology. A representative quote was: “I studied teaching in special education for four years and we had one course on the subject. . . Then, after I finished studying, I have to constantly learn more and more technological tools. When?” One participant explained this from her perspective by saying:

I’m still a new and relatively young teacher, I can find out and research myself and I do it, but I see teachers who work with me who are very lost in this matter, they don’t like or understand technology.

Moreover, participants noted that even when they are already learning to use various technological tools, it is not enough, because they need guidance on how to teach students to use these tools and how to adapt them to learners with SNs. In addition, regarding the ability to use technological tools during teaching, all participants said that due to the COVID-19 pandemic, they underwent various training courses and received a lot of training regarding the use of the new technological tools, but in practice, “everything is really in a nutshell. I don’t feel like I’m very skilled or very professional in anything technology-related”, said one participant who represented the others.

Beyond the challenges in understanding innovative digital tools and how to use them in teaching, all the participants noted that they lacked knowledge of how to integrate their creativity into the use of these tools. Characteristic quotes were: “I don’t want to just let them use a certain tool, I want to integrate myself, who I am and what are my ideas as a teacher. . .”, “So how do I change the software so that every student gets what they need?”, or, “I don’t want to become a technical support, rather to continue to be a meaningful teacher”.

4.5.2. Challenges Related to the Conditions of the Learning Environment

The participants noted throughout the interviews that technology is part of the new era and in order to communicate with the GA learners and be relevant to them, they need not just knowledge of how to use technological tools correctly and effectively, but also a suitable physical environment. In other words, there are challenges that relate more to the technical aspect of using technology, or challenges due to unexpected disruptions: *“Sometimes the internet goes down or a projector doesn’t work in the classroom, and I prepared a lesson based on a presentation—these are specific cases that are very challenging”*. A more complex technical issue is the age gap between the students and the teachers. It seems that sometimes the delay in the lesson due to a technical issue that may harm the lesson itself: *“Today I mainly experience failures in the operation of technological tools. . . This creates chatter and dialogue during the lesson until alternative work is found, and sometimes it’s necessary to change the lesson plan”*.

Regarding the availability of technological tools during teaching, some participants noted that sometimes they participate in excellent in-service courses, but in terms of operation in schools, this is irrelevant because there are no budgets to purchase and operate these tools for everyone, or students need these tools even outside of school hours, but parents are unable to purchase subscriptions to use various technological tools.

However, alongside the difficulties and challenges, the participants also detailed possible solutions, such as regular accompaniment of training and guidance in schools with regular technical support during school hours, pooling resources to help acquire licenses to operate digital tools at school and at home, and most importantly, raising awareness among policy leaders in the education system to receive the latest guidance and tools.

5. Discussion and Conclusions

This study sought to learn about teachers’ perspectives regarding the social inclusion of GA learners with SNs, and about how teachers think digital tools should be implemented in order to promote social inclusion. The massive worldwide development of technology and innovative digital tools influence all areas of life, and education is an essential field that should carefully learn how to modify and implement those tools [12]. Although scholars understand the benefits of integrating digital tools in all educational programs, there is much disagreement about the quantity and methods to be employed [12,16,31]. While one of the main goals of education is to prepare learners for the future, the vast development of technology provides several challenges and opportunities to all educators. To begin with, the characteristics of GA learners change as well. For example, these learners were born into a digital environment and thus they do not need any pre-learning methods or introductions to use technology. Most of these learners use digital tools on a daily basis for communication and collecting information about topics of interest to them. Thus, the main goal educators have is to maintain the GA learners’ motivation to acquire learning strategies that will contribute to their ability to study and investigate [20]. This leads to another challenge, which is teachers’ need to be always updated on new digital tools in order to integrate them into their curricula [10]. A variety of digital and assistive technology tools have also been developed to allow learners with SNs easier access to information, but this is not enough when considering their social inclusion because GA learners communicate mainly through digital tools with minimum face-to-face social interaction.

Throughout the historical trajectory of special education, different cultures have implemented inclusion differently, while emphasizing diverse perspectives regarding the benefits and the challenges of such a process [24]. While scholars are still looking for the most efficient methods for social and academic inclusion of learners with SNs, studies that focus on the challenges of inclusion of GA learners with SNs are rare, and this research aims to provide some of the missing information.

Twenty-one teachers who are experts in teaching learners with SNs, and teach in inclusive environments, participated in this study through individual semi-structured interviews. The interviewers led the interviews along a path that allowed a better understanding

of the main goal and the three original questions: 1. How do teachers use digital tools to promote the social inclusion of GA learners with SNs? 2. How do they develop individual intervention programs that promote the social inclusion of GA learners with SNs? 3. What challenges do teachers deal with while integrating digital tools that promote the social inclusion of GA learners with SNs? Following the analysis of their answers, several themes emerged, each revealing refreshing perspectives that contribute to the existing knowledge.

Regarding the integration of digital tools into their teaching, participants supported previous studies, but with some reservations, such as: although the integration of innovative technologies in education is essential for learners' future, implementing these technologies is not a simple mission. This is because of the rapidly evolving nature of technology that forces them to continually update their teaching skills and knowledge regarding digital tools, to keep pace with the changing educational landscape. All of this is in addition to their need to be updated and professional in the disciplines they teach. Therefore, as the participants suggested, teachers' professional development programs that focus on innovative teaching methods would promote a deeper understanding of the psychological dynamics of GA learners and how digital technologies should be used in inclusive learning environments. Additionally, teachers must strive to use their curricula and teaching environments to teach competencies such as critical thinking and problem-solving alongside academic knowledge in order to equip GA learners with the tools they need to thrive in an increasingly interconnected and technologically driven society. Nevertheless, in essence, teaching GA learners also offers educators opportunities to innovate and evolve their practices to better meet the needs of today's learners. By embracing technology and adapting it to new pedagogical methods, schools can empower GA learners to navigate the complexities of the digital age with confidence and competence.

Specific investigation of participants' views about promoting the social inclusion of GA learners with SNs revealed the caution teachers should apply when using innovative digital tools. To begin with, over the years, several assistive digital tools have been developed to allow learners with SNs to learn independently and efficiently [16,33], but these tools focus mainly on promoting academic rather than social skills. The dilemma teachers must address with GA learners with SNs is the need to find the balance between allowing learners with SNs to use these tools and the goal of promoting social inclusion. Additionally, as mentioned by some researchers [20], learners' learning deficiencies and other SNs dramatically influence their abilities to use digital tools efficiently with proper critical thinking and judgments regarding how these tools should be applied. Moreover, teachers should focus on understanding the meaning of the disabilities of these learners, given that they did not change during the GA era [25], in order to look for relevant digital tools that they can implement that will promote both academic and social inclusion, rather than specifically on the methods of teaching using innovative educational technologies. Therefore, not only are teachers challenged by having to learn about innovative digital tools and about how to teach GA learners how to use them efficiently, but they are also challenged with adapting these tools according to various special needs to provide them with appropriate academic and social skills for both their immediate and future needs.

6. Limitations and Implications for Future Studies

Although many researchers focus their studies on the characteristics and varied needs of GA learners, there is a lack of knowledge regarding the ways social inclusion of learners with SNs can be efficiently implemented within this generation. Moreover, rapid technological changes also influence social norms and needs, and thus the goals of social inclusion should change accordingly.

The present research was based on 21 semi-structured interviews with teachers from the same country. While the information they provide is essential for a better understanding of how to promote social inclusion, similar studies should be conducted in different countries in order to develop international perspectives on the issue and to allow educators to learn from their colleagues from different cultures and countries. Another perspective

that should be studied refers to parents' role in the inclusion of GA learners with SNs. GA learners are usually exposed to new digital technologies at home, and thus, parents' perspectives regarding their role in promoting social inclusion based on the use of digital technologies may also contribute to the overall field of GA learners and their social and learning needs.

Meanwhile, the possible ways of implementing the significant findings from this research refer to all participants in education. While educational leaders must ensure the implementation of all updated digital tools in schools, along with providing teachers with professional guidance and technical support, they should also promote the social inclusion of GA learners with SNs based on the digital tools all learners use daily. Teachers should actively look for innovative and updated digital tools they can use with all their GA learners, including those with SNs. Additionally, teachers should think creatively about innovative ways of applying those tools effectively while conducting the necessary adaptations for learners with SNs so that their social inclusion will be promoted as well.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of Achva Academic College.

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

Data Availability Statement: Due to privacy and ethical restrictions, data is not available for all. If researchers are interested in further information, they are welcome to approach the author by email.

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

References

1. Akmal, Y.; Koeswanto, S.; Hartati, S. Character development in generation alpha through social-emotional learning with parent involvement. In *1st International Conference on Early Childhood Care Education and Parenting (ICECEP 2019)*; Atlantis Press: Paris, France, 2020; pp. 87–93.
2. Amelia, L.T.D.; Balqis, N.R. Changes in Communication Patterns in the Digital Age. *ARRUS J. Soc. Sci. Humanit.* **2023**, *3*, 544–556. [\[CrossRef\]](#)
3. Rizk, J.; Hillier, C. Digital technology and increasing engagement among students with disabilities: Interaction rituals and digital capital. *Comput. Educ. Open* **2022**, *3*, 100099. [\[CrossRef\]](#)
4. Chaidi, I.; Drigas, A. Digital games & special education. *Tech. Soc. Sci. J.* **2022**, *34*, 214.
5. Bouck, E.C.; Satsangi, R. Accessibility and assistive technology considerations for students with disabilities during remote instruction. *Teaching. Except. Child.* **2020**, *52*, 260–268.
6. Pazilah, F.N.P.; Hashim, H.; Yunus, M.M. Using Technology in ESL Classroom: Highlights and Challenges. *Creative Educ.* **2019**, *10*, 3205. [\[CrossRef\]](#)
7. Flavian, H. *Transdisciplinary Teaching in Inclusive Schools: Promoting Transdisciplinary Education for Learners with Special Needs*; Springer Nature: Berlin/Heidelberg, Germany, 2014; ISBN 978-3-031-52508-7.
8. Flavian, H.; Uziely, E. Determinants of teachers' attitudes towards inclusion of pupils with attention deficit hyperactivity disorder: The role of teacher education. *Front. Educ.* **2022**, *7*, 941699. [\[CrossRef\]](#)
9. Tremblay, P. High school teachers' representations of inclusion in Québec. *Int. J. Technol. Incl. Educ.* **2014**, *1*, 388–393. [\[CrossRef\]](#)
10. Dimitriadou, E.; Lanitis, A. A critical evaluation, challenges, and future perspectives of using artificial intelligence and emerging technologies in smart classrooms. *Smart Learn. Environ.* **2023**, *10*, 12. [\[CrossRef\]](#)
11. Ziatdinov, R.; Cilliers, J. Generation Alpha: Understanding the next cohort of university students. *arXiv* **2022**, arXiv:2202.01422.
12. Haleem, A.; Javaid, M.; Qadri, M.A.; Suman, R. Understanding the role of digital technologies in education: A review. *Sustain. Oper. Comput.* **2022**, *3*, 275–285. [\[CrossRef\]](#)
13. Apaydin, Ç.; Kaya, F. An analysis of the preschool teachers' views on alpha generation. *Eur. J. Educ. Stud.* **2020**, *v6 n11*, 123–141.
14. Selwyn, N. Ed-Tech within Limits: Anticipating educational technology in times of environmental crisis. *E-Learn. Digit. Media* **2021**, *18*, 496–510. [\[CrossRef\]](#)
15. Miller, D. Embracing the Technological Metamorphosis: Envisioning Higher Education for Generation Alpha in a Shifting Educational Landscape. *Int. J. Softw. Eng. Comput. Sci.* **2023**, *3*, 88–96. [\[CrossRef\]](#)
16. Lawrence, J.E.; Tar, U.A. Factors that influence teachers' adoption and integration of ICT in teaching/learning process. *Educ. Media Int.* **2018**, *55*, 79–105. [\[CrossRef\]](#)
17. Lakes, K.D.; Cibrian, F.L.; Schuck, S.E.; Nelson, M.; Hayes, G.R. Digital health interventions for youth with ADHD: A mapping review. *Comput. Hum. Behav. Rep.* **2022**, *6*, 100174. [\[CrossRef\]](#)

18. Tondeur, J.; Scherer, R.; Baran, E.; Siddiq, F.; Valtonen, T.; Sointu, E. Teacher educators as gatekeepers: Preparing the next generation of teachers for technology integration in education. *Br. J. Educ. Technol.* **2019**, *50*, 1189–1209. [\[CrossRef\]](#)
19. Lowenthal, P.R.; Persichini, G.; Conley, Q.; Humphrey, M.; Scheufler, J. Digital literacy in special education: Preparing students for college and the workplace. In *Research Anthology on Inclusive Practices for Educators and Administrators in Special Education*; IGI Global: Hershey, PA, USA, 2022; pp. 524–537.
20. Winter, E.; Costello, A.; O'Brien, M.; Hickey, G. Teachers' use of technology and the impact of COVID-19. *Ir. Educ. Stud.* **2021**, *40*, 235–246. [\[CrossRef\]](#)
21. Flores, M.A.; Swennen, A. The COVID-19 pandemic and its effects on teacher education. *Eur. J. Teach. Educ.* **2020**, *43*, 453–456. [\[CrossRef\]](#)
22. Naginder, N.; Manroshan, S. The face of education and the faceless teacher post COVID-19. *Horizon* **2020**, *2*, 39–48.
23. Zhao, Y.; Watterston, J. The changes we need: Education post COVID-19. *J. Educ. Chang.* **2021**, *22*, 3–12. [\[CrossRef\]](#)
24. Francisco MP, B.; Hartman, M.; Wang, Y. Inclusion and special education. *Educ. Sci.* **2020**, *10*, 238. [\[CrossRef\]](#)
25. Desforges, M.; Lindsay, G. *Procedures Used to Diagnose a Disability and to Assess Special Educational Needs: An International Review*; National Council for Special Education: Warwick, UK, 2010.
26. Siyam, N. Factors impacting special education teachers' acceptance and actual use of technology. *Educ. Inf. Technol.* **2019**, *24*, 2035–2057. [\[CrossRef\]](#)
27. Elmira, A.; Negmatzhan, A. The role of school and family cooperation in inclusive education. *World J. Educ. Technol. Curr. Issues* **2022**, *14*, 498–506. [\[CrossRef\]](#)
28. Korkmaz, G.; Toraman, Ç. Are We Ready for the Post-COVID-19 Educational Practice? An Investigation into What Educators Think as to Online Learning. *Int. J. Technol. Educ. Sci.* **2020**, *4*, 293–309. [\[CrossRef\]](#)
29. Gülay, H.; Akman, B.; Kargi, E. Social skills of first-grade primary school students and preschool education. *Education* **2011**, *131*, 663–679.
30. Maleki, M.; Mardani, A.; Chehrzad, M.M.; Dianatinasab, M.; Vaismoradi, M. Social Skills in Children at Home and in Preschool. *Behav. Sci.* **2019**, *9*, 74. [\[CrossRef\]](#) [\[PubMed\]](#)
31. Petretto, D.R.; Carta, S.M.; Cataudella, S.; Masala, I.; Mascia, M.L.; Penna, M.P.; Piras, P.; Pistis, I.; Masala, C. The Use of Distance Learning and E-learning in Students with Learning Disabilities: A Review on the Effects and some Hint of Analysis on the Use during COVID-19 Outbreak. *Clin. Pract. Epidemiol. Ment. Health* **2021**, *17*, 92–102. [\[CrossRef\]](#)
32. Delisio, L.A.; Bukaty, C.A. UDL and assistive technology. In *What Really Works with Universal Design for Learning*; SAGE Publications Company: Thousand Oaks, CA, USA, 2019; Volume 157.
33. Stalmach, A.; D'Elia, P.; Di Sano, S.; Casale, G. Digital Learning and Self-Regulation in Students with Special Educational Needs: A Systematic Review of Current Research and Future Directions. *Educ. Sci.* **2023**, *13*, 1051. [\[CrossRef\]](#)

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.