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The role of digital resources in ensuring the continuity of learning for students with disabilities in Moroccan primary schools

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Abstract

In spite of the commitments towards inclusive education in the Moroccan legislation, students with disabilities experience barriers related to the infrastructure, teachers' skills, and teaching practices. The goal of the research is to identify what forms of digital resources can optimally address the unique needs of these students, as well as the access and application of that must be accomplished to enhance their education, and to provide equal educational access to all students. Through semi-structured interviews with teachers, a qualitative study was conducted in five primary schools with resource rooms in the Mediouna directorate of Morocco.

The analysis found three types of especially helpful digital resources: digital mind maps, interactive quizzes and educational videos. Such resources improve student engagement, academic progress and knowledge structuring as well as sustain participation and personal focus on getting learning done.

This research, one of the first empirical investigations on the integration of digital resources for students with disabilities in the Moroccan educational context, proposes a conceptual model to guide inclusive educational practices in Morocco and similar contexts. However, successful implementation requires addressing challenges regarding the balance between digital tool usage and classroom practices, improving accessibility, and enhancing teacher training.

Keywords: inclusion, digital resources, learning continuity, students with disabilities, Moroccan primary education

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Introduction

In recent years, Morocco has pursued an ambitious policy to universalize access to primary education (Ministry of National Education, 2018). As a result, the introduction of free and compulsory education has developed and with it a growing number of children are receiving an education. Simultaneously the country has been committed to integrating more and more students with disabilities into the regular mainstream education system (Law No. 07-00 on Education and Training, 2000).

Unfortunately, this is often not the case in practice, these legislative and political progressions leave a lot to be desired, particularly regarding embedding the real school inclusion of this group of vulnerable students, especially at the primary level (Benjelloun & Bouslamti, 2020). These obstacles include inaccessible infrastructure, inadequate teacher training and insufficiently adapted teaching practices.

Therefore, the digitalization of primary school in this context is a strong candidate for promoting inclusion and continuity of student learning (UNESCO, 2019). Digital resources and products may include diverse types, such as educational videos, interactive quizzes, and digital mind maps, all of which are likely to more effectively meet targeted needs and support active engagement (Cumming & Draper Rodriguez, 2013; Hwang et al., 2014).

This study also investigates how the use of existing digital resources can play a role in supporting the continuity of education for students with disabilities in Moroccan primary schools. The central research problem is as follows:

To what extent can the integration of various digital resources foster the continuity of learning for students with disabilities integrated into primary school classrooms?

This study is based on two main research questions:

1. What types of digital resources best meet the specific needs of students with disabilities experiencing learning difficulties within primary school classrooms, while ensuring the accessibility and feasibility of their implementation?
2. How can the use of various digital resources foster the improvement of learning for students with disabilities integrated into primary school classrooms, while ensuring equal opportunities in terms of time spent with teachers and other students?

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1. Literature review

- **Digital Resources in Inclusive Education: Theoretical Frameworks**

The use of digital resources in inclusive education can be understood through several theoretical frameworks. They advocate for using multiple means of engagement, representation, and action/expression for diverse learners (Meyer et al., 2014). This approach is consistent with Vygotsky's sociocultural theory of learning (1978), which posits that the development of cognition and learning is mediated by tools. Digital technologies function these mediating tools that may mediate the differences between students' current potentials and their higher potentials with appropriate assistance and collaboration (Cumming & Rodriguez, 2017).

On this basis, the Technology Acceptance Model (Davis, 1989; Venkatesh & Davis, 2000) describes the influence of perceived usefulness and perceived ease of use on teachers' and students' decisions to adopt digital resources. Researchers like Teo (2009) have applied this framework to educational contexts in developing nations as well, pinpointing the relevance of cultural and infrastructural considerations when addressing technology adoption in classrooms.

- **Evidence on Digital Resources for Students with Disabilities**

International Digital research from high development countries showed that digital resources are beneficial for students with disabilities. McKnight et al. (2016) synthesized 124 studies published in peer-reviewed journals in the area of digital learning resources to K-12 students with disabilities and found positive relationships between digital learning resources and academic achievement, engagement, and independent learning skills.

Chauhan (2017) and Zheng et al. (2016) have found moderate to large positive impacts on learning outcomes when digital resources are effectively incorporated into instruction for students with a variety of learning needs. Much research has been conducted to determine what specific types of digital resources work best for students with disabilities. Videos paired with text, visual scaffolding, audiobooks, and descriptions help students with hearing impairments, attention deficits, and the learning disabled. Interactive quizzes with instant feedback mechanisms encourage self-paced learning and improved retention for students with cognitive and learning disabilities. Digital mind maps and visual organizers have shown particular benefits for students with executive functioning challenges and those on the autism spectrum.

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- **Digital Inclusion in Developing Countries**

While evidence from developed countries is robust, the implementation and effectiveness of digital resources in developing countries present unique challenges and considerations. A systematic review by Tauson and Stannard (2018) examining technology use for inclusive education across 20 developing countries highlighted the "double digital divide" faced by students with disabilities – accessibility barriers to both technology infrastructure and appropriately designed content.

Research from contexts similar to Morocco provides valuable insights. In Tunisia, they documented how mobile learning applications improved mathematical achievement among students with learning disabilities when implemented alongside teacher training. In Egypt, digital storytelling enhanced engagement and language skills for primary students with intellectual disabilities, though implementation was hindered by infrastructure limitations and teacher technical skills.

Across the Middle East and North Africa (MENA) region, common barriers to digital inclusion including limited electricity in rural areas were identified, inadequate internet connectivity, lack of adapted hardware/software in local languages, and insufficient teacher preparation.

- **Digital Resources in Moroccan Education**

Research specifically addressing digital resources for inclusive education in Morocco remains limited, highlighting the significance of the current study. According to the Ministry of National Education (2018), Morocco adopts this integrated approach by establishing the national strategy which aims to promote and integrate ICT in educational pedagogical practices, with some positive policy depicted; however, the study found that substantial obstacles exist in technical infrastructure and teacher training especially in remote areas. The Digital Morocco 2020 strategy, though ambitious, has struggled to reach marginalized populations, including persons with disabilities, in practice; there has often been a yawning gap between its aspirations and implementation.

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It is also scarce that few studies have investigated the use of technology for students with disabilities in the Moroccan context. Although the national policy framework recognizes that digital technologies can be a catalyst for inclusive education (Ministry of National Education, 2018), its actual integration on the ground shows a disconnect between what the policy wants and what is delivered in classrooms. Existing research has not thoroughly addressed the infrastructure challenges, teacher preparedness, and state of adaptation of digital content to help students with disabilities in Moroccan schools.

This limited amount of studies on digital inclusive education in Morocco constitutes a huge gap that this research investigates. Although Morocco enhanced its educational policy for inclusion (Ministry of National Education 2018), there are few empirical studies on how to properly implement digital content with students with disabilities, especially in primary education. This study helps to fill this gap by offering evidence-based knowledge insights for which types of digital resources when utilized support learning continuity best for students with disabilities in Moroccan primary schools.

- **Conceptual Framework and Definition of Key Terms**

Grounded in literature review, this study adopts a conceptual framework that incorporates relevant components of Universal Design for Learning (UDL). The UDL framework is particularly relevant to our research as it provides principles that support inclusive education through flexibility in how information is presented, how students respond, and how they are engaged in learning. The three core principles of UDL - providing multiple means of engagement, representation, and action/expression - align perfectly with our investigation of digital resources for students with disabilities.

Digital resources facilitate multiple means of representation by offering content in various formats (visual, auditory, interactive), which is essential for students with diverse learning needs. They enable multiple means of action and expression by providing different ways for students to demonstrate their knowledge. Finally, these resources support multiple means of engagement by allowing personalized learning experiences that can maintain interest and motivation.

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This UDL-informed framework, combined with sociocultural learning theory and contextual factors related to the Moroccan educational setting, guides us to explore how digital resources can help maintain learning for students with disabilities in Moroccan primary schools, while addressing the specific challenges and opportunities present in this context.

In this study, we define inclusion based on UNESCO (2019), which conceptualizes inclusion as "a process which values diversity and difference and a process which helps to overcome barriers to the presence, participation and achievement of learners". This research is focused on the educational inclusion of students with disabilities in Moroccan primary school classrooms (grade 1 until grade 6) in mainstream institutions from an operational perspective (the practice of education) and understanding how digital resources enhance the meaningful participation and the learning of students with disabilities in classrooms where students without disabilities are learning.

- **Digital Resources:**

Based on Cumming and Draper Rodriguez (2013) and Hwang et al. Digital resources are defined as electronic tools and content that are meant to facilitate teaching and learning (Davies et al., 2014). Specifically, we present three types identified in the literature as especially salient for students with disabilities:

1. **Educational Videos**: Audio-visual media with an educational objective, and accessibility, with things like closed captions and voice speed adjustment.
2. **Interactive Quizzes**: These are digital assessment tools that provide immediate feedback and may be tailored to various complexities (McLaughlin et al., 2016)
3. **Digital Mind Maps**: Tools for visualizing and organizing ideas hierarchically and connecting different concepts.

- **Learning Continuity:**

Derived from Boelens et al. According to Ross (2017), learning continuity refers to the continued progress in achieving educational goals with minimal disruption. For students with disabilities, continuity refers to uninterrupted access to appropriate learning opportunities, participation in meaningful educational activities, and academic growth upon past learning.

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- **Students with Disabilities**:

In line with the classification used by the Moroccan Ministry of National Education (2018), students are included in the present study according to their recognized disablement with placement in classrooms of ordinary schools. These students may have learning disabilities, attention disorders, sensory impairments, and mild to moderate intellectual disabilities, among others.

Each of these operational definitions clarify and make precise the cornerstones of the investigation that follows in this study. Theoretical frameworks inform the data gathering and analysis process to ensure that the research questions are being answered in a theoretically sound and contextually relevant manner.

- **Research Gap and Contribution**

The review of existing literature identifies some crucial gaps that the current study would help to address. First, although much has been published on digital resources available to teachers working inclusively in developed nations, there is limited demographic or geographic specificity found in the literature, specifically, the Moroccan context. Second, research that specifically examines the types of digital resources most appropriate for students with disabilities in primary education settings in Morocco is virtually non-existent. Third, there is limited empirical evidence on how digital resources can ensure learning continuity for students with disabilities within the specific constraints and opportunities of the Moroccan educational system.

The present study aims at bridging these gaps by investigating the best types of digital resources that meet the specific needs of students with disabilities in Moroccan primary schools, as well as how to ensure that these digital resources foster learning continuity and prevent the unequal educational opportunities among students with disabilities.In so doing, it offers crucial empirical evidence to inform policy and practice in the Moroccan context but also, more broadly, to the international literature on digital resources for inclusive education.

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2. Methodological approach:

- **Research Setting:**

This study was performed in public primary schools of the Casablanca-Settat region of Morocco. The broader region was initially selected for its relatively high density of school inclusion programs for students with disabilities, reflecting a broader national context for documenting school inclusion (Ministry of National Education, 2020).

The perceptions of Creswell & Poth, practices, and experiences called for a deeper insight, therefore their study followed a qualitative approach such an articulated perspective is crucial for analysing such complexity as the inclusion of digital tech within the framework of an inclusive school.

- **Sample**

While the Casablanca-Settat region offers numerous primary schools, our specific focus on the Mediouna area was determined by practical and ethical considerations. Because of the sensitivity regarding students with disabilities who were inside of resource classrooms, we were not able to gain access to schools and interview opportunities. Mediouna also offered a context in which we were able to secure the requisite permissions for research while going through ethical protocols for working with vulnerable groups.

We studied the schools which have the resource rooms in the Mediouna area and confirm they are still functional. A representative sample of 5 schools was selected, which were available from the list of schools above, for our study. Within these 5 selected schools, we identified a total of 46 teachers working in inclusive settings. In accordance with the Moroccan teacher training structure, each school has only one resource room manager, giving us a total of 5 resource room managers. Our initial exploration involved 16 teachers (including the 5 resource room managers) as well as the 5 school principals. However, for the final analysis, we primarily considered the responses of the 5 resource room managers, who constituted our main target population due to their specific expertise and central role in using digital resources for students with disabilities.

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There are active resource rooms in these schools that cater to students with disabilities well, which meets the necessary criteria for our investigation. Moreover, it was relevant and there had been an interest in their usage, reflecting our search for schools willing to be part of the study in which the application of digital resources to design solutions for special needs students could be assessed.

Table 1: Participant Demographics and Sample Characteristics

Participant Category	Number	Gender Distribution	Age Range	Years of Experience	Notes
Resource Room Managers	5	All female (5F, 0M)	32-52	2-3 years in resource room	One per selected school; primary focus of analysis
Regular Teachers	11	8 female, 3 male	Not fully specified	1-15 years	Initial exploration only
School Principals	5	All male (0F, 5M)	Not specified	15-20 years	One from each selected school
Total Participants	21	13 female, 8 male	27-52	1-20 years	From 5 schools in Mediouna region

3. Data collection method:

Semi-structured interviews with participants were undertaken to extract rich and relevant data about the use of digital resources, and their perceived impacts on the continuity of learning for pupils with disabilities (Qu & Dumay, 2011). Thus, the current research utilized this method because it provided a balance between flexibility and structure, enabling participants to provide in-depth descriptions of their experiences while still systematically addressing the core research questions. The interviews lasted from 30 to 45 minutes and allowed enough time to adequately discuss the topics.

- **Data Collection Tools:**

An interview guide was developed to maintain consistency across all interviews and to ensure comprehensive coverage of the study's key research questions (Turner, 2010). The guide was structured around three main themes, each with specific sub-themes:

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1. Types of Digital Resources Used:

Platforms and tools used (e.g., educational software, online platforms, assistive technologies)

Frequency and context of use (in-class, at home, for individual or group activities)

Source and accessibility of resources (free, institutional, or teacher-generated)

2. Appropriateness of Digital Resources to Students' Needs:

Level of adaptation to the type of disability (visual, cognitive, motor, etc.)

Ease of use and accessibility features (voice support, enlarged text, interactive elements)

Students' engagement and motivation when using the resources

Teachers' perception of relevance and usability for inclusive teaching

3. Impact on Learning and Pedagogical Continuity:

Perceived effects on students' academic progress and participation

Changes in teaching practices and classroom organization

Role of digital resources during school closures or hybrid learning periods

Collaboration between special education and mainstream teachers

To ensure reliability, the interview protocol was piloted with a small group of educators to verify the clarity and consistency of the questions. Revisions were made to reduce ambiguity and ensure consistent interpretation across all participants.

Regarding validity, the questions were directly aligned with the theoretical framework and research objectives, ensuring content validity. To enhance internal validity, triangulation was applied by comparing responses from multiple schools and cross-checking findings against existing literature. All interviews were audio recorded and transcribed verbatim to preserve the richness and accuracy of participants' responses, minimizing biases associated with note-taking (Seidman, 2013).

- **Data Analysis Procedures:**

All interviews were audio-recorded, transcribed verbatim, and then analyzed using NVivo 12 qualitative data analysis software. The analysis followed a systematic approach combining deductive and inductive coding. Initial coding was guided by the research questions and theoretical framework, while allowing for emergent themes. A frequency analysis of key terms was conducted to identify recurring expressions and concepts across all interviews.

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Word frequency queries were generated to visualize the most prominent concepts expressed by participants, resulting in word clouds that highlight the terminology most frequently used when discussing digital resources.

- **Theoretical Assumptions:**

Based on the UDL framework and the literature reviewed, we formulated the following theoretical assumptions to guide our investigation:

Digital, such as educational videos would be best suited to meet the specific needs of students with disabilities experiencing learning difficulties in primary school classrooms. Their accessibility and ease of implementation would also be ensured through adapted functionalities (Cumming & Draper Rodriguez, 2013; Boelens et al., 2017).

When students with disabilities are included in primary school classrooms, they would benefit from a good learning experience due to the available different kinds of digital tools and resources, and this would afford them with equal access to time spent with teachers and other students (Vinson & Dalsen, 2021; Hwang et al., 2014).

4. Analysis of results:

Through qualitative analysis of omit data from the semi-structured interviews, the study's thematic results of the role of digital resources in ensuring the learning continuity of students integrated into primary school classrooms with disabilities will be presented. This analysis is organized into three themes.

- **Lexical Analysis of Digital Resources Terminology**

Before presenting the thematic analysis, we conducted a lexical analysis of the interview transcripts using NVivo to identify patterns in terminology used by participants when discussing digital resources. Figure 1 presents a visual representation of the key terminology used by resource room managers, with the size of each word proportional to its frequency in the interview transcripts.

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Figure 1: Visual representation of the key terminology used by resource room managers

As illustrated in the word cloud, the terminology most frequently used by the participants reveals their priorities and experiences. Resource room managers repeatedly emphasized 'Educational videos' (cited by all five managers, appearing 24 times in the transcripts) as essential tools for their students. Teacher 1 (age 49) specifically mentioned how these videos allow students to 'better visualize and understand concepts', a sentiment echoed by Teacher 2 (age 35) who described them as 'a real asset'.

The 'Digital resource room' itself (16 occurrences) was frequently cited as a crucial space, with one manager describing it as providing 'a variety of adapted resources that allow us to meet the specific needs of each student with disabilities'. Terms referring to cognitive processes such as 'Understanding' (16), 'Organization' (18), and 'Assimilation' (14) dominated the discourse, reflecting the participants' focus on how digital tools support learning processes rather than just technology itself.

Equipment terms like 'Tablets' (17), 'Projectors' (15), and 'Computers' (14) were consistently mentioned by participants as the practical means through which digital resources are delivered. As Teacher 2 (age 27) explained when discussing digital mind maps, 'We project them in class and the students can also consult them from their tablets.'

This lexical analysis confirms the centrality of certain digital resources and highlights the importance participants placed on how these tools facilitate cognitive processes for students with disabilities.

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- **Types of Digital Resources Adapted to the Needs of Students with Disabilities**

The participants identified three main categories of digital resources that they consider particularly well-suited to the needs of their students with disabilities experiencing learning difficulties: educational videos, interactive quizzes, and digital mind maps.

Educational Videos: The teachers emphasize the importance of educational videos for these students. Teacher 1 (age 49) explains: "*We regularly use educational videos for our students with disabilities, as they allow them to better visualize and understand the concepts. We make sure they are subtitled and the pace is adapted*." Teacher 2 (age 35) agrees: "*Educational videos are a real asset, as they allow them to better understand and assimilate the lessons*."

These comments show that subtitling and adjustable pacing of the videos are essential characteristics to facilitate the understanding and assimilation of content by students with disabilities.

Interactive Quizzes: Some of the participants also identify interactive digital quizzes as a particularly well-suited tool. According to Teacher 1 (age 49): "*Digital quizzes are also very useful for evaluating their achievements in a personalized way*." Teacher 3 (age 52) also notes that "*They particularly appreciate the interactive quizzes that give them immediate feedback and validate their progress.*"

These enable individualized learning monitoring through differentiated levels of difficulty and feedback adapted to the needs of each student.

Digital Mind Maps: Finally, the teachers emphasize the benefits of digital mind maps. As Teacher 2 (age 27) explains: "*They are particularly beneficial in helping our students with disabilities to structure and memorize their knowledge. We project them in class and the students can also consult them from their tablets." Teacher 5 (age 32) adds: "They are a wonderful tool to help our students organize their ideas and knowledge*."

The combination of collective projection in class and individual access from the students' devices helps to facilitate both the organization and memorization of learning.

Although these resources are considered relevant, the participants also highlight the challenges related to their accessibility and practical implementation in the classrooms. As Teacher 1 (age49) points out: "*However, the accessibility of the resources remains a challenge, particularly for students with motor impairments who have difficulty manipulating the tools."*

In addition, Teacher 2 (age 27) mentions that "the training of teachers on the

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pedagogical use of these tools is still an area for improvement." The digital resource room manager (educational advisor) also adds that "the coordination with classroom practices remains a constant challenge."

Thus, while these three types of digital resources seem to respond appropriately to the specific needs of students with disabilities, their accessibility and effective implementation in primary school classrooms still require efforts in terms of equipment and teacher training.

- **Impact of Digital Resources on the Learning of Students with Disabilities**

The participants emphasize that the use of digital resources has a significant positive impact onthe engagement and progress of learning for students with disabilities.

Increased Engagement: Teacher 3 (age 52) points out: "*Thanks to the digital resources, our students with disabilities are much more engaged and active in their learning*." Interactive resources, such as quizzes, seem to particularly foster this increased engagement of the students. Personalized Progress: The school principal with 23 years of experience explains that the establishment of a digital resource room in their school has allowed "This allows them to benefit from personalized support while ensuring equal opportunities compared to other students." Thus, the individualized use of digital tools fosters progress adapted to the needs of each student with disabilities.

Compensation of Inequalities: the participants also emphasize that the use of digital resources makes it possible to compensate for the inequalities in time spent with teachers. As Teacher 3 (age 52) indicates: "*This helps maintain their motivation and compensate for the inequalities in time spent with the teacher*." Access to these digital tools, in addition to classroom interactions, seems to allow for reducing the gaps related to differences in individual follow-up.

Main Benefits Observed The participants highlight several key benefits of using digital resources to enhance the learning of students with disabilities: increased engagement, personalized progress, validation of progress, and compensation of inequalities.

Thus, the use of digital resources seems to play a crucial role in promoting active participation, supporting individualized learning, recognizing student progress, and addressing disparities, thereby fostering a more inclusive learning environment for studentswith disabilities within primary school classrooms.

- **Role of Digital Resources in Ensuring Learning Continuity**

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The participants emphasize the essential role of digital resources in ensuring the continuity of learning for students with disabilities.

According to teachers, digital resources play a key role in facilitating the understanding and assimilation of content by these students. As Teacher 4 (age 35) remarks: "*Educational videos are a real asset, as they allow them to better understand and assimilate the lessons*." Furthermore, Teacher 5 (age 32) highlights the contribution of digital mind maps: "*They are a wonderful tool to help our students organize their ideas and knowledge. This greatly facilitates the memorization and recall of learning*."

Thus, digital resources seem to play an essential role in supporting the understanding, structuring, and memorization of learning content for students with disabilities.

The participants identify several key uses of the different digital resources to ensure this continuity of learning:

- Educational videos allow students to better understand and assimilate lessons, especially for complex concepts.
- Digital mind maps help students organize their knowledge and facilitate the memorization of learning.
- Interactive quizzes contribute to the personalized monitoring of student progress and achievements.

However, despite these benefits, the digital resource room manager (educational advisor) highlights the challenges related to the coordination between these tools and classroom practices: "The coordination with classroom practices remains a constant challenge."

As the manager of the resource room, the educational advisor is on the front line to support teachers and students in the use of digital technologies. He explains that despite the provision of a variety of adapted resources, such as subtitled videos, quizzes with differentiated levels of difficulty, and mind mapping software, the coordination with classroom activities remains a major challenge.

"*We provide a variety of adapted resources that allow us to meet the specific needs of each student with disabilities and to ensure personalized monitoring of their learning. Nevertheless,the coordination with classroom practices remains a constant challenge*."

The present challenge is to determine where the right balance lies between utilization

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and the provision of digital resources and the individual face to face monitoring that is industry practice among teachers. They caution that technological tools should not replace classroom interaction altogether but should rather be used to complement it harmoniously.

However, this constant needs to be addressed in the context of school inclusion, as it suggests that there is no systematic way of correlating digital resources with face-to-face teaching practices while this integration seems to play an active role in promoting the continuity of learning for students with disabilities in primary school classrooms of Brazil during the pandemic period.

DISCUSSION

The analysis of the results from this study provides valuable insights into the role of digital resources in ensuring learning continuity for students with disabilities integrated into Moroccan primary school classrooms. This discussion examines the implications of our findings, addressing first the appropriateness of different digital resources for these students, and then their impact on learning and educational equity.

Digital Resources Meeting the Specific Needs of Students with Disabilities

First, the analysis of results identified three main categories of digital resources that the participants believe are more appropriate to fit the needs of these students: educational videos (Cumming & Draper Rodriguez, 2013), interactive quizzes (Boelens et al., 2017), and digital mind maps (Hwang et al., 2014). Resources of such nature seem well-suited to respond to the specific needs articulated by students with disabilities when it comes to accessibility, differentiation, and structure of learning.

Educators have found that educational videos represent a unique opportunity to meet the needs of students with disabilities. Participants pointed to their importance for these students, writing, "They allow them to better visualize and understand the concepts" when appropriately designed with features like subtitles and adjustable pacing. This finding is in agreement with Cumming & Draper Rodriguez (2013) who found that when audio-visual resources are adapted appropriately they can improve the literacy and comprehension of students with a range of learning needs.

Another type of well-suited digital resource was identified: Interactive quizzes. These insights were summarized by participants who, in speaking of the same tools, stated that they

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are "very useful for evaluating their achievements in a personalized way" and that students "particularly appreciate the interactive quizzes that give them immediate feedback and validate their progress." This supports prior research by Boelens et al. (2017), who found that digital assessment tools with immediate feedback mechanisms can support differentiated evaluation and promote student autonomy in learning.

The third resource category is digital mind maps. These tools "are especially helpful in facilitating our students with disabilities to shape and retain their knowledge" and "a great tool to assist our students in organizing their ideas and understanding," teachers undernoted. This finding is consistent with Hwang et al.'s (2014) study on the visual organizational tools that facilitate knowledge structuring and their retention for students struggling with learning.

But though these resources are appropriate, the study revealed that significant challenges related to their accessibility and implementation in Moroccan primary school classrooms. Participants cited problems such as challenges faced by "students with motor impairments who have difficulty manipulating the tools," inadequate "teacher training in the pedagogical application of these tools," and challenges in "linking the tools with classroom practices." This corroborates previous research highlighting the disparity between the vast potential of digital resources and the context in which they may be used in inclusive settings (Vinson & Dalsen, 2021).

These three types of digital resources thus showed great potential in meeting the present needs of students with disabilities in primary schools in Morocco, but suggested that their effective implementation depended on addressing several key challenges: physical accessibility of the resources, training of teachers on their pedagogical use, and strategies for better integration into classroom practices.

- **Impact of Digital Resources on Learning and Educational Equity**

Whereas identifying suitable resources was one component of the study, the other showed the impact of digital tools on the learning outcomes and educational opportunities for students with disabilities in integrated settings.

Such technology has a positive effect on emotional engagement and behaviour and ultimately the learning of children and young people with disabilities (the conference03). Teachers remarked on how "because of the digital resources, the students with disabilities were much more engaged and active in their learning." This heightened engagement seems

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critical to a key mechanism through which digital resources support learning continuity, as students who are more actively involved in their learning process are likely to make better progress.

It also shed light on the impact that digital resources can have on supporting personalized progress for students with disabilities. According to a school principal with 23 years of experience, "Having a digital resource room opened its doors for us in providing them personalized support while levelling the playing field compared to the other students." Digital learning tools could provide opportunities to address the learning differences of students with disabilities without compromising their integration into the mainstream classroom.

Essentially, participants stressed that the utilization of digital tools allows for a "remedial time spent with teachers." This study is significant in terms of the major issue of educational equity, suggesting that digital tools can provide more consistent entry to educational resources for disabled students. In this sense, these students can be coached and supported to not necessitate an undue blending of teacher time, welcoming classrooms that are much richer and more equitable in their learning opportunities.

The study lists few important benefits of using the digital resource for the learning of students with disabilities: increased engagement, personalized progress, validation of progress, and compensation of inequalities.

These findings align with earlier research as to the potential of specific digital technologies to promote school inclusion (UNESCO, 2019), in that appropriately designed and deployed digital resources have the power to be agents for difference helping to create more inclusive and equitable learning environments.

Furthermore, it appears that digital resources are essential because they supported students with disabilities comprehending, organizing, and remembering actual learning content. Teachers reported that " educational videos are an excellent resource because they provide the students with greater opportunities to understand and assimilate the lessons" and that "digital mind maps" supported "the learning to be remembered and recalled".

These teacher statements demonstrate that digital resources can be specific to the cognitive challenges of students with disabilities and provide them with alternative learning opportunities. These are adjunct to other types of teaching.

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In addition to these advantages, amongst others, participants also identified challenges to integrating digital resources into face-to-face teaching practice in a pedagogically sound way (Vinson & Dalsen, 2021). The digital resource room manager acknowledged that "finding a healthy equilibrium between technology backed personalized support and teacher observing and monitoring of the classroom, is the hard part." This finding indicates that digital resources can provide students with disabilities with a considerable enhancement to their learning opportunities, but how and when to integrate digital resources with existing pedagogical practices is a complex challenge which is not always immediately apparent and necessitates planning and contemplation.

- **Towards a Conceptual Model of Digital Resource Integration**

The results of the research demonstrate the potential that digital resources have to work toward school inclusion and provide continuity of learning for students with disabilities, but the entire impact of digital inclusion will rely on addressing significant issues surrounding accessibility, the appropriation made by teachers and the complementary performance with classroom pedagogical practices. Thoughtful consideration of these issues would surely allow better optimization of the impact of these tools to the success and well-being of this population of vulnerable students. As part of this study, we conducted a reflective analysis of digital resources and developed a conceptual model that describes the principal mechanisms of digital resources that can facilitate continuity of learning for students with disabilities, who are integrated into primary school classrooms.

This provides the following conceptual model:

The first of which, modified digital resources including an educational film, interactive tests, and visual digital cards, have a positive impact on the engagement, development, and continuity of the learning process of these learners. Once they actually have more functions that successfully enable to better achieve their customized requirements. Second, two factors influence how well digital resources are used: how accessible they are to students and the degree to which the tools are appropriated by teachers.

These elements condition the successful implementation of digital resources in teaching practices.

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Finally, the coordination between the use of digital resources and face-to-face teaching practices appears to be an essential factor in ensuring the effective school inclusion of students with disabilities. It is a matter of finding the right balance between these two teaching-learning modalities.

- **Implications and Limitations**

The findings of this study have important implications for policy and practice in inclusive education in Morocco. First, they propose that the investment in certain types of digital resources—namely educational videos, interactive quizzes, and digital mind maps—should be prioritized when designing interventions to support the learning of students with disabilities in primary schools. Second, they underline the importance of thorough teacher training initiatives that focus not only on the technical capabilities of how well digital resources can be used but also how teaching methods should be adapted to make the most of those new materials with regard to how they are used within schools. Third, they highlight the importance of eliminating access barriers to ensure that digital resources truly serve the interests of all students with disabilities, regardless of the nature of their disability.

Nevertheless, this study has limitations that should be considered. The small sample size and focal point on a certain region would limit the generalizability of findings to the wider Moroccan context. More specifically, while the perspectives of teachers and administrators are valuable, there is no capture of the direct experiences and perspectives of students with disabilities themselves. The limitations of the present study suggest the need for larger-scale studies in the various regions of Morocco and the inclusion of the voices of disabled students and their families in future research.

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Conclusion

This study has shed light on the essential role that digital resources can play in ensuring the continuity of learning for students with disabilities integrated into primary school classrooms in Morocco.

The in-depth analysis of the collected data revealed that certain types of resources, such as educational videos, interactive quizzes, and digital mind maps, seem particularly well-suited to meet the specific needs of these students, in terms of accessibility, differentiation, and structuring of learning.

Beyond their suitability to the needs, the use of these digital resources has also demonstrated a significant positive impact on the engagement, progress, and continuity of learning for students with disabilities. However, the participants underscored the challenges related to the coordination between these digital tools and face-to-face teaching practices, emphasizing the need to find a harmonious balance between these two teaching- omit modalities.

While digital resources show great promise as a means of promoting **school inclusion** and supporting the success of vulnerable students, their effective integration requires addressing certain challenges, particularly in terms of accessibility, teacher training, and articulation with classroom practices. A deeper reflection on these various issues would undoubtedly help to further optimize the positive impact of these tools on the school path of students with disabilitis

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