

# Usage of Smartphones as Universal Design for Learning in Inclusive Education

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## Abstract

*There are millions of children around the world who have disabilities. Because of their apparent challenges, these children have often been marginalized or excluded from schools. The study's main aim was to discover the role of smartphone usage as a Universal Design for Learning (UDL) in inclusive education. As per the UNCRPD Act of 2006, every technology should be available to everybody. All examples of inclusive practice are material and human resource assistance, manageable class sizes with teaching assistants as needed, and adequate pre-service and in-service teacher training with requisite support. Collaboration among teaching professionals is critical to the success of Universal Design for Learning in inclusive classrooms because both impacts on the development of special needs children's inclusion and teaching outcomes should be investigated simultaneously.*

## Keywords

*Inclusive education; CWSN; UDL; Disability education; Smartphones; UNCRPD;*

## Introduction

Children with impairments and many others who struggle with learning have long been ostracized or excluded from schools worldwide. To profit in a regular classroom, children with impairments require the aid of special educators. The Salamanca Statement and the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) brought a new era for special education. The Salamanca Statement established the international standard for recognizing a more inclusive educational philosophy. The declaration says that every individual, regardless of their talents or needs, is entitled to obtain an education alongside their classmates in an inclusive education model based on the social theory that emphasizes a student's strengths and rejects previous medical/deficit approaches.

It emphasizes changes in the social environment as a critical goal and refutes the assumption that the problem is contained within the individual with special educational needs, therefore undermining the previous unique education paradigm, which was primarily based on a medical approach (Kavkler et al., 2015; UNESCO, 2001). Inclusionary education policy and implementation vary by country and cover many models, from those that promote full inclusion to those that retain some special education provision. As a result, despite the same underlying standards and pronouncements, inclusive education practices and action plans vary among countries.

Both inclusion and educational quality should be examined at the same time because they have an impact on society's growth in all of its forms. Inclusion should not be confused with integration, nor can it be viewed as a simple addition to the existing educational structure; instead, it should be viewed as a transformational process within a culture, environment, and institutions that must consider and value variety to a more significant extent. The shortage of expertise and funding and occasionally negative attitudes toward diversity are the most typically stated roadblocks. Parents would hide their special-needs children from the public eye because it was considered a shame to have such a child. Although opinions have shifted in a good direction, opposing viewpoints remain common.

Furthermore, a research-based analysis is still required to create an effective inclusion strategy. It is impossible to objectively comprehend and examine the current condition and challenges of inclusive education in India without conducting the necessary research. An initial evaluation of the efficacy of inclusive education policy and practice would inspire and facilitate the strategy development process.

The study's main aim was to discover the role of smartphone usage as a Universal Design for Learning (UDL) in inclusive education.

## Methods

Data were collected using a content analysis strategy and a qualitative method. The information was acquired from scholarly articles, websites, and reputable journals. After acquiring the data, the researcher narrowed it down to the most relevant information for the study's goal. Following that, the researcher analyzed the material about Universal Design for Learning (UDL), one of the most recent trends in inclusive education that aids students in improving teaching and learning in an inclusive classroom setting.

## Universal Design for Learning (UDL)

Universal Design for Learning is an educational philosophy that aims to give all students equal access to learning and success. The UDL model is founded on three principles:

- (i) Multiple means of engagement,
- (ii) Multiple means of representation and
- (iii) Multiple means of action and expression.

Because UDL is built on principles, it is far too adaptable to local classroom scenarios and circumstances.

The first principle of UDL, i.e., multiple means of engagement, advocates for using several techniques to engage students with disabilities in the learning process. Facilitating varied modes of engagement requires assessing student traits and adapting education to those attributes to generate purposeful, engaged students to fit a lot of passion, skills, learning styles, and other criteria. This instructional technique is highly emotive and motivating since it deals with student motives, beliefs, self-efficacy, self-expectations, and individual

autonomy.

According to Rose and colleagues (2014), the provision of multiple forms of representation is the second principle of UDL. This principle revolves around communication and the necessity for teachers and students to think about how to communicate effectively with groups with a wide range of communicative styles and receptive skills.

The provision of numerous modes of action and expression is the third principle of UDL. It is all about encouraging goal-directed learning that applies the most appropriate tactics for each learner. Meyer et al. (2016) proposed that teachers provide choices for executive functions, such as working with students as guides in goal-setting, planning, and developing learning or task-oriented techniques, per this notion.

### **Smartphones Usage**

Sung, Chang & Liu (2016) revealed that smartphones have steadily been adopted into educational settings over the last two decades. Thanks to digital technology, most people now carry their mini-computers with remarkable computing capacities, such as laptops, personal digital assistants (PDAs), tablet personal computers (PCs), cell phones, and e-book readers. One-to-one computing has a lot of computing power and portability, which, when paired with wireless communication and context-sensitivity features, makes it an outstanding learning tool for regular classrooms and informal outdoor learning. Bedesem (2012) found that Self-monitoring methods effectively boost on-task behaviour across educational contexts and handicap categories, remain favourable reactive effects on on-task behaviour when updated with technology, and provide similar outcomes when updated with different types of technology. Interact with the smartphone through specific verbal inputs. The smartphone was fitted with leisure activity files that could be opened or activated and lists of partners (and respective telephone numbers) that could be reached (Lancioni, Singh, O'Reilly, Sigafos, Campodonico & Alberti, 2017).

Many new apps based on artificial intelligence have been introduced in our inclusive education system. Google meet, Zoom, Webex. Apps have engaged students in an inclusive education setting. Special and Inclusive Education teachers use Google classroom apps for teaching, training, and evaluating purposes. In the era of pandemics, smartphones have played a significant character in rendering quality education and evaluation.

### **Conclusion**

The strength of inclusive education in emerging nations can also be linked to the value placed on inter-disciplinary support from diverse consultants and specialists as needed, and their practice show collaboration amongst these professions. Enable inclusion, and international areas recognize the need for additional resources. More study on the usefulness of UDL should and could have been done at this point in its development, but it is still lacking. A social theory-based inclusive education model stresses students' strengths while rejecting previous medical/deficit concepts. That reflects a primary goal of changing the social environment, highlighting that the problem originates within the individual with special educational needs, thus challenging the previous particular education model, which was mostly centred on the medical approach. Smartphones have played a significant character in rendering quality education and evaluation situations through different educational teaching apps. In this pandemic, Google classroom apps were introduced for teaching, training, and evaluating purposes of inclusive education.

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