

Paper Title: Empowering Youth with Disabilities: Innovative Educational Interventions for Out-of-School and At-Risk Individuals - A Multi-Institutional Case Study.

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Abstract

This action-oriented research project constitutes a pilot study aimed at supporting Out-of-School-Children and Youth with Disabilities and at risk of dropping out in Bhutan. Initiated by Paro College of Education in conjunction with four implementing partners situated in Thimphu, the capital district of Bhutan, this endeavor strives to address the educational and developmental needs of children and youth with disabilities. The implementing partners comprise two public schools that support the Special Educational Needs (SEN) program and two Civil Society Organizations (CSOs) dedicated to the welfare of children and youth with disabilities. It is worth noting that while the majority of these partners are located within the urban confines of Thimphu, one school is situated in a rural area of the Thimphu district.

Both pre and post-intervention data have been gathered through key informant interviews (teachers and parents) and classroom observations (individualized lessons). It is a collection of four case studies for individuals with varying disabilities that explore the transformative impact of individualized interventions. These four individuals are affected by disabilities such as Cerebral Palsy, Down Syndrome, Intellectual Disability, and Cortical Visual Impairment.

The study findings reveal that these individuals' lives have been positively altered through tailored interventions. Over the course of a year, facilitators in specialized

centers implemented personalized strategies for each individual. These interventions resulted in observable advancements across social, intellectual, and physical domains. The children exhibited notable social engagement, cognitive growth, and motor skills.

The outcomes emphasize the potential for positive change in the lives of disabled children, even in resource-constrained settings. These case studies serve as a testament to the value of inclusive and targeted approaches, offering hope and inspiration to families, practitioners, and policymakers alike.

Keywords: Educational innovations, Out of School Children (OOSC), Children at Risk of Dropping Out, disabilities, inclusive education, action research, intervention strategies, individualized lessons, case studies, transformative impact, social engagement, cognitive growth, motor skills, resource-constrained settings, inclusive approaches.

Introduction

This collection of case studies delves into the lives of four extraordinary children, each navigating their path with distinctive abilities and disabilities. Through the lenses of Cortical Visual Impairment (CVI), Down Syndrome, Intellectual Disability, and Cerebral Palsy (CP), we not only explore the obstacles they confront but also celebrate the remarkable triumphs that define their journeys. Disabilities are not constraints but rather facets of human diversity. These case studies aim to deepen our appreciation for the unique capabilities and potential inherent in every child, irrespective of the challenges they encounter. These narratives stand as a testament to the transformative power of love, support, and unwavering determination that propel these children and their families forward. As we unravel the stories of these exceptional individuals, we hope to kindle a greater understanding of the beauty woven into the tapestry of diversity and the limitless possibilities that emerge when we wholeheartedly embrace it.

Context of the Study:

The current formal Bhutanese education system has undergone an extensive transformation since the inception of modern educational system in Bhutan in 1914 with

the establishment of first secular school. It was in the late 1950s and early 1960s that 59 formal schools were established across the country with curriculum that was borrowed from neighboring India. Hindi, the official language of India, was extensively used as a medium of instruction in these schools and it was in 1962 that the government decided to adopt a Western-style education system and the English language as the medium of instruction in all schools. Within a period of six decades, the educational sector has grown from 59 schools in 1960s to 767 schools in 2021 (NSB, 2021). Similarly, the enrolment figures have increased from 400 in the 1960s to 208,993 students in 2021 (NSB, 2021).

Bhutan embraced its first special education system in 1973 by opening a School for the Blind, currently known as the Muenselling Institute, which catered for twenty-six students with visual impairment. In 1979, the institute initiated the integration of their students into a local mainstream school. Since then, students from this institute have had the opportunities to participate equally with other peers in daily school activities in mainstream schools. Today many of the alumni from this institute contribute equally to the socioeconomic development of the country, taking up posts such as physiotherapists, teachers, musicians, entrepreneurs, curriculum officers, etc., to name just a few (Chhogyel, 2006; Dorji, 2015).

Realizing the need for such enabling services for children with other forms of disability, the government initiated special education programmes by establishing a self-contained classroom/special educational needs (SEN) unit in Changangkha Middle Secondary School as a pilot project in 2001. This unit provided opportunities for integration of children with SEN into the mainstream classroom. In 2003 another special school, currently known as Wangsel Institute, was established for children with hearing impairments as a SEN unit within the Drugyel Lower Secondary School.

However, the concept of Inclusive Education (IE) in Bhutan was introduced in 2011, although it had existed in the West since the 1980s and 1990s. Dukpa (2014) and Schuelka (2014) assert that IE in Bhutan is still in its initial stage with many challenges that impede the implementation of successful inclusive practices. The challenges include untrained teachers handling heterogeneous classrooms, a curriculum that is

rigid, a pedagogy implemented as teacher-centric, inappropriate assessment practices, minimal parent–teacher collaboration, and financial constraints (Dukpa, 2014; Schuelka, 2014, 2018). Despite these challenges, and due to the increasing number of children with SEN in Bhutan, the Ministry of Education have currently identified 24 public schools as schools that support IE and SEN programmes across the country. These schools that support IE and SEN programmes cater for approximately 748 students with SEN.

Bhutan, in its move to provide education for every child including children with disabilities has ratified or is a signatory to several international declarations, conventions, instruments, policies, legislation and commitments that address inclusion in education. These include the Convention on the Rights of the Child (1990), the Education for All Act (1990), The Salamanca Statement and Framework for Action on Special Needs Education (1994), the Darkar Framework for Action (2000), the Convention on the Rights of the Persons with Disabilities (2010), the United Nations Millennium Development Goals (2008), and the Economic and Social Commission for Asia and Pacific (ESCAP) Proclamation on the Full Participation and Equality of People with Disabilities (2008). Similarly, Bhutan’s commitment to supporting every child and children with disabilities has also been strongly addressed in the Constitution of Bhutan (Royal Government of Bhutan, 2007) and other policies and legislation (Gross National Happiness Commission, 2019; MoE, 2014, 2017b, 2017c). For instance, the Constitution of Bhutan highlights equal access to free basic education from pre-primary grade to tenth grade for all Bhutanese children as indicated:

The state shall provide free education to all children of school going age up to tenth standard and ensure that technical and professional education shall be made generally available and that higher education shall be equally accessible to all on the basis of merit (Article 9.16).

Qualitative analysis of dropouts and children who have never attended school based on 2017 population and housing census of Bhutan indicated “out of the total population of 6 to 24-year old, 7 percent have never attended school, while 9.7 percent have dropped out of school prior to completing Class X (MOE, 2020). It is asserted that these children who are out of school or never attended schools are often those from the most socially

marginalized communities, including children with disabilities, children from ethnic-minorities, children excluded due to gender barriers and children living from extreme poverty (UNICEF & UNESCO, 2016).

Conversely, many countries have challenges in responding to the needs of out-of-school children (OOSC) due to lack of key data, analysis and policy gaps that address OOSC. Similarly, these countries generally lack adequate tools and methodologies to identify OOSC that measures the scope and inform the complexity of exclusion and disparities, that assess the reasons of exclusion, and to inform policy and planning. In addition to lack of information on known OOSC, there are also unknown OOSC who are not in the radar of the government and not monitored. They are children who have never been enrolled in the school and may have not been part of formal schooling system – for example children with disabilities attending special institutions. Similarly, Bhutan is no exception that has challenges and issues involving OOSC and in particular out-of-school children with disabilities (OOSCD) due to lack of reliable information and effective policies.

Children with disabilities are often recognized as being vulnerable and at higher risk of dropping out of school before attaining basic education (Freeman & Simonsen, 2015; Stark & Noel, 2015; Smink and Reimer, 2009). It is also emphasized that children and adolescents with disabilities are more likely to be out of school or at risk of leaving school before completing primary education (UNESCO, 2017). Notwithstanding, disability as a common risk factor there is minimal literature that address research on out-of-school children with disabilities (Sharma, 2014). Further, it is emphasized that in developing countries, children with disabilities encounter significant barriers to attend and complete basic schooling (Filmer, 2008). According to United Nations, there are 240 million children living with one or more form of disabilities in the world out of which 50% of them are out of school (UNICEF USA, n.d.).

It is estimated that the prevalence rate of persons with disabilities stands at 2.1% in 2017 with 15567 persons with disabilities (PHCB, 2017) in Bhutan. Worryingly, it is also estimated that there are 21% of children aged between 2 and 9 years who have one or more disabilities as per the comprehensive Two Stage Child Disability Study Report,

2012 (NSB, 2012). There are currently 748 children with disabilities out of 1600 aged 3 to 24 years enrolled in mainstream schools that support special education programmes (Tshering, P.S., 2021). The remaining children with disabilities have either attended schools in the past or never attended. However, there are no studies that address OOSCD and children with disabilities at risk of dropping out in Bhutan and what is being done for these children with disabilities.

Approach/Methodology

The situational analysis for this action-oriented research project entailed a comprehensive examination of Bhutan's context, with a particular focus on the situation of out-of-school children with disabilities (OOSCD) and those at risk of dropping out in the capital district. Remarkably, there were no existing literature or documents specifically addressing OOSCD and these vulnerable children in Bhutan. This study marked a pioneering effort in this regard.

The research design adopted an exploratory sequential mixed methods approach. The first phase involved qualitative data collection through semi-structured interviews to gain insights into the challenges faced by OOSCD and children with disabilities at risk of dropping out. In the second phase, a quantitative survey was conducted to identify and locate OOSCD in the district, with the collaboration of schools, civil society organizations, and the Ministry of Education. This survey also gathered data on the types and severity of disabilities.

Research Sites

Originally, the study was planned to be conducted in two public schools in Bhutan's capital district (Thimphu), where Special Educational Needs (SEN) programs were in place, with one in the urban area and the other in a rural setting. However, as the research progressed, it became evident that the involvement of a Civil Society Organization (CSO) and an institute focusing on children and youth with disabilities was necessary. Thus, two public schools, a CSO, and an institute were included as implementing partners. They were chosen based on their expertise in providing

intervention strategies and programs, ensuring the enrollment and support of out-of-school children with disabilities and those at risk of dropping out.

A brief background of the implementing partners is discussed as follows:

Changangkha Middle Secondary School

The public school in the heart of the city has a rich history, initially established in 1961 as a primary school serving up to Class 5. Over the years, it evolved into a Middle Secondary School, with students now enrolled up to Class 10. In 2001, the government introduced special education programs, inaugurating a self-contained classroom for Special Educational Needs (SEN) at Changangkha Middle Secondary School as a pilot project. This unit aimed to facilitate the integration of children with SEN into mainstream classrooms. In 2011, the adoption of Inclusive Education led to a significant increase in the enrollment of children with SEN.

Currently, the school caters to 101 children with SEN, supported by 14 SEN teachers. These students receive various levels of inclusion based on the severity of their disabilities, ranging from full inclusion to partial inclusion or specialized support in a self-contained classroom. Disabilities among these children encompass Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder, Cerebral Palsy, Down Syndrome, Learning Difficulties, physical disabilities, speech disorders, and gross motor problems.

The school provides a range of intervention strategies and programs, tailored to each child's specific needs, including Activity for Daily Living, Behavioral Interventions, Pre-Vocational Skills Education, and Functional Curriculum. These approaches will be employed for out-of-school children with disabilities at risk of dropping out in the context of this study.

Yangchengatshel Higher Secondary School

Situated in a rural highland village at the foot of the Dagala Mountain range, about 15 kilometers from Thimphu city, this school was founded in 1992 as a community school. Over the years, it has grown from a primary school to a middle secondary school, and in

early 2022, it further expanded to become a higher secondary school. This educational institution primarily serves the children of nomadic communities and police personnel employed at Chamgang Central Prison, Bhutan's largest penitentiary.

In 2019, the school was designated as an inclusive school, and it presently accommodates 40 children with Special Educational Needs (SEN) across various classes, supported by seven SEN teachers. These SEN students are predominantly from nomadic backgrounds and the police community. However, most of them have mild to moderate disabilities, with the majority facing Learning Disabilities, while a few are diagnosed with Autism Spectrum Disorder and Down Syndrome.

The school employs a model of partial inclusion, offering pull-out services and employing intervention strategies like Activity for Daily Living, Behavioral Interventions, Pre-Vocational Skills Education, and other Functional Curricula for children with moderate disabilities. Students with mild disabilities are fully integrated into mainstream classrooms, studying alongside their peers without disabilities. This study will implement Activity for Daily Living and other Functional Curriculum as intervention strategies for out-of-school children with disabilities at risk of dropping out, where applicable.

Ability Bhutan Society

Established in 2007, the Ability Bhutan Society (ABS) is a public benefit organization dedicated to providing services and support to children with moderate to severe disabilities. In 2011, ABS gained registration as a Civil Society Organization (CSO) in Bhutan.

At present, ABS serves 30 children, comprising 22 males and 18 females, through center-based intervention programs. A team of 16 personnel, including special educators, occupational therapists, speech therapists, medical professionals, and social workers, provides support. These children have various disabilities, including Autism Spectrum Disorder, deafness, Cerebral Palsy, Down syndrome, developmental delays, Dandy Walker Syndrome, physical disabilities, speech disorders, and Meningoencephalitis.

ABS delivers direct one-to-one early interventions at their center, home-based interventions for children with profound disabilities, Activity for Daily Living, family support programs, and outreach programs. To address the shortage of experts and professionals within Bhutan, ABS collaborates with external organizations, bringing in specialists such as special educators, speech therapists, physical therapists, ABA therapists, occupational therapists, pediatric neuropsychologists, touch therapists, and developmental pediatricians. These experts offer short-term support and training to ABS's social workers and facilitators, equipping them to work effectively with children who have moderate to severe disabilities. For the research project, ABS will provide therapies and early intervention strategies tailored to each child's specific needs.

VTOB Educational Solutions and Services

The VTOB Educational Solutions and Services (VTOB) was established in 2020 initially as a teachers' voluntary group and a social enterprise in the wake of the COVID-19 pandemic to support the community by complementing, supporting and offering a host of educational opportunities through creative, innovative and voluntary programs. Currently there are 100 children (50 males and 50 females) including 3 children with disabilities (2 males and 1 female) availing different services such as digital literacy, academic coaching, STEM functional learning and music. There are 55 (10 males and 45 females) personnel supporting these aforementioned services consisting of teachers, special educators, IT professionals and researchers. The VTOB caters its services and support mainly to teachers and children both enrolled in schools and out of school. Similarly, the VTOB also offers children with any need-based intervention programs and initiatives.

Strategies

Interviews with parents and teachers are a fundamental aspect of qualitative research, entailing direct one-on-one conversations with participants to obtain valuable insights, experiences, and perspectives. In the context of this study, these interviews with both educators and parents have proven to be invaluable. They offer a multifaceted

exploration of the cases under investigation, shedding light on diverse viewpoints and contributing to a comprehensive understanding. By engaging both teachers and parents, the study benefits from a well-rounded and holistic perspective, enhancing the depth and richness of the collected data. These insights, originating from individuals closely involved with the children's education and well-being, play a crucial role in informing the research and its outcomes.

Teacher interviews yielded essential insights into the academic development, behavior, and case-specific progress of the individuals under scrutiny. These discussions encompassed interventions and instructional methods implemented to assist the students in their educational journey. On the other hand, interviews with parents provided valuable information concerning the individuals' backgrounds, family dynamics, and the home environment. Furthermore, parents shared their unique viewpoints on their children's difficulties, strengths, and aspirations. Their feedback, particularly regarding the efficacy of interventions and observations of positive transformations, constituted a vital component of the comprehensive qualitative data analysis. These combined perspectives from both educators and parents enriched the research, fostering a more profound understanding of the cases in question.

Classroom observations involved systematically observing and recording behaviors, interactions, and activities within the educational environment. This method helped gather real-time data about how individuals with intellectual disabilities interacted in a learning setting. Observations shed light on any changes or improvements perceived in the students' attitudes, behaviors, and academic achievements.

Case 1

Jigme, a 12-year-old, is grappling with significant challenges associated with Cortical Visual Impairment (CVI). CVI has led to issues such as gait instability and impaired hand function, which in turn hinder his mobility and interactions with the environment. CVI often coexists with other neurological problems, contributing to his complex condition (Malkowicz et al., 2006).

Issue: Jigme's family structure consists of his single mother and four siblings, with him being the second youngest. Individuals with CVI may exhibit varying behaviors in response to light stimuli. Some, like Jigme, may display staring behaviors towards light sources, while others might be sensitive to light (National Eye Institute, 2020). Notably, his youngest sibling is only a few months old. Jigme's mother sustains the family through door-to-door vegetable vending while simultaneously navigating legal conflicts involving two older siblings, one of whom is incarcerated. These circumstances have led to Jigme's confinement within his room as his mother tends to the infant and manages her sales. It is noteworthy that Jigme is the only member of his family with a disability, indicating that he likely acquired CVI postnatally.

Baseline: Initial assessment of Jigme revealed him to be bedridden and exhibiting uncontrolled urination and defecation, occasionally playing with his own feces. He demonstrated aggressive behavior and was completely blind.

Intervention Goals

Intervention Time: Since November 2022, the child has been receiving six hours of intervention per week.

Communication Skills: The intervention focuses on enhancing comprehension and expression through the use of a tactile communication board.

Feeding: The primary aim is to promote independent feeding skills.

Toileting: The intervention seeks to facilitate independent toileting.

Dressing: The goal is to work towards achieving independent dressing skills.

Post-intervention:

However, subsequent visits indicated a shift in his demeanor. He began to show friendliness and joy upon interacting with his tutor and others. He exhibited improved comprehension of basic instructions related to personal hygiene and diet. Progress was also evident in sensory development, as he became more adept at grasping small objects, ceased the habit of excessively widening his mouth, and refrained from self-injurious behaviors. Jigme's responsiveness to instructions from both his tutor and

mother improved, and issues related to anger and fainting episodes diminished. Notably, Jigme began to communicate through physical touch, holding onto his tutor, signaling an expansion of his communicative capabilities.

Early intervention, therapy, educational support, and specialized services are crucial for children with CVI to facilitate their development and learning (National Eye Institute, 2020). Jigme's case underscores the intricate interplay between CVI-related challenges and socioeconomic hardships. The presence of a newborn in the family and the lack of sufficient support compelled Jigme's confinement, limiting his opportunities for social interaction and developmental stimuli. However, within a few months of tailored intervention from a tutor, Jigme displayed remarkable improvement, consistent with findings from Malkowicz et al. (2006), suggesting that appropriate interventions can significantly enhance outcomes for individuals with CVI. The study by Malkowicz et al. (2006) indicated that 95% of a group of 21 children demonstrated noteworthy improvement after 4 to 13 months of intervention, indicating the potential for neuroplasticity in the visual system and visual recovery even in challenging cases.

Discussion and Analysis of Jigme's Case of CVI

Cortical Visual Impairment (CVI) is a unique and complex condition characterized by bilateral visual loss caused by injury to visual areas in the brain, without significant impairment of the eye or anterior visual pathways (Malkowicz et al., 2006). This condition has significant implications for affected individuals, particularly children, as it is recognized as the leading cause of bilateral visual impairment in Western countries (Good et al., 1994). The case of Jigme, a 12-year-old boy with CVI, offers insights into the challenges and potential interventions associated with this condition.

Early Intervention and Support for CVI: The literature underscores the importance of early intervention and support for babies and children with CVI. Jigme's case aligns with this perspective, highlighting the significance of timely intervention. According to the National Eye Institute (2020), early intervention for CVI should ideally occur within the first three years of life. This window is crucial for providing tailored interventions and therapies to aid in the development and learning of children with CVI. The range of early intervention services, including assistive technology, speech and language services,

counseling, and medical support, as outlined by the National Eye Institute (2020), reflects the multidisciplinary approach necessary to address the complex needs of these children.

Neurological and Developmental Challenges: Children with CVI often face a range of additional neurological challenges. It is noted that many of these children exhibit other significant neurological disabilities and may even experience seizures (Good et al., 1994). Jigme's experience resonates with this observation, as his gait instability, impaired hand function, and mobility challenges are likely influenced by the underlying neurological issues associated with CVI. The use of touch to identify objects, stronger color perception than form perception, and head-turning behavior during reaching, as discussed by Jan et al. (2008), further illustrate the unique ways in which children with CVI engage with their environment due to their visual impairments.

Potential for Improvement and Neuroplasticity: The case of Jigme provides hope by demonstrating the potential for improvement and neuroplasticity in children with CVI. Malkowicz et al. (2006) report that 95% of a group of 21 children showed significant improvement after 4 to 13 months of intervention. This finding emphasizes the adaptability of the visual system and the potential for reintegration and visual recovery, even in challenging cases. Moreover, the study by Jan et al. (2008) indicates that while most patients with CVI do not achieve full visual acuity, some improvement is possible, particularly for those with better initial acuity. These insights underscore the need for tailored interventions and therapies that leverage the brain's capacity for plasticity to enhance visual function and overall quality of life for individuals with CVI.

In conclusion, Jigme's case highlights the multifaceted nature of Cortical Visual Impairment (CVI) and the challenges it presents to affected individuals and their families. It also underscores the importance of early intervention, specialized support, and the potential for improvement through neuroplasticity. By drawing on the literature, this analysis offers a comprehensive understanding of CVI and its impact on children's lives, advocating for holistic approaches that address both visual and neurological aspects of this condition.

Case 2

Sangay, is a student with an intellectual disability studying in Yangchengatsel Higher Secondary School. He is 17 years old, Sangay's family context is complex, with an alcoholic father and four children, Sangay being the eldest. The mother appears unkempt, potentially indicative of her struggle to manage her family's needs. Sangay is involved in housework and contributes physically during weekends. Sangay's two younger sisters are enrolled in classes 8 and 7, highlighting a family commitment to education despite challenges. The mother's interview showcases her dedication to Sangay's education, even if her understanding of his potential is limited.

Issue: Sangay has been missing classes often and is on the verge of dropping out of school. One thing he has an intellectual disability and secondly his home situation wasn't supportive.

Baseline Data: Sangay is a child who is quite mature in his age compared to his peers in the class and found embarrassment and discomfort in the class. Owing to this reason, he frequently stays absent from the class. As a result, there is a high risk for the child to drop out of school.

What is intellectual disability?

Intellectual disability is a lifelong condition characterized by limitations in cognitive functioning and adaptive behaviors. Timely and consistent interventions can significantly improve the quality of life for individuals with intellectual disabilities. This paper delves into intervention strategies implemented since October 2023 for a specific case, Sangay, who faces academic weaknesses and possesses physical strengths. The interventions discussed herein encompass functional literacy, functional numeracy, activities of daily living (ADLs), and vocational training.

Understanding Intellectual Disability: Intellectual disability is a multifaceted condition influenced by a combination of factors, including underlying medical or genetic causes, concurrent challenges, and environmental factors. Schalock (2011), Luckasson et al. (2002), and the World Health Organization (WHO) (2001) concur that disabilities stem

from health conditions that limit bodily functions, activity capabilities, and participation possibilities.

Intellectual disability pertains to challenges in general cognitive abilities that impact performance in two key domains: • Intellectual functioning, encompassing skills such as learning, problem-solving, and judgment. • Adaptive functioning, involving daily activities like communication and independent living.

Approximately 1% of the population is affected by intellectual disability, with roughly 85% of cases classified as mild. Notably, males are more frequently diagnosed with intellectual disability than females (American Psychiatric Association, 2023). This concept falls under the broader scope of disability, which addresses limitations in individual functioning within a social context, resulting in considerable disadvantages for the individual.

The American Psychiatric Association (2023) outlines that diagnosing intellectual disability involves identifying difficulties in both intellectual and adaptive functioning. Evaluation of intellectual functioning entails the use of culturally suitable and psychometrically valid intelligence tests, incorporating standardized assessments into the diagnostic process. An IQ score around 70 to 75 suggests notable intellectual limitations, although its interpretation should consider overall cognitive abilities and variations in subtest performance. Adaptive functioning is assessed across three domains: conceptual, social, and practical. Evaluation employs standardized measures and interviews. Intellectual disability is categorized as mild, moderate, or severe, with symptoms typically emerging in childhood and potential delays in language or motor skills becoming evident by age two. Mild intellectual disability might specifically manifest during school years when academic challenges arise.

Regarding intellectual capabilities, intelligence constitutes a general mental aptitude, encompassing faculties such as reasoning, planning, problem-solving, abstract thinking, grasping intricate concepts, rapid learning, and experiential learning (Gottfredson, 1997; Neisser et al., 1996).

According to the American Psychiatric Association (2023), Numerous origins lead to intellectual disability. It might be linked to a genetic syndrome like Down syndrome or Fragile X syndrome. Additionally, it could arise after an illness, for instance, meningitis, whooping cough, or measles. Trauma to the head during childhood, exposure to harmful substances like lead or mercury, as well as brain malformation, maternal illness, and environmental influences such as alcohol, drugs, or toxins, can all be contributory factors. Various events related to labor and delivery, infections during pregnancy, and complications at birth, including inadequate oxygen supply, can also play a role.

Tailored Interventions: The success of interventions for individuals with intellectual disabilities relies on the customization of support services to match their unique strengths, needs, interests, and aspirations. An in-depth assessment of an individual's abilities and goals is imperative to craft effective intervention strategies. The school drafted individualized intervention for Sangay from October 2022 and it was offered six hours per week till November 2023.

Intervention Strategies:

Functional Literacy:

Objective: To attain minimal reading and writing skills necessary for functioning in society.

Rationale: Functional literacy empowers individuals to find employment and manage their day-to-day living needs effectively.

Functional Numeracy:

Objective: To improve understanding of basic financial concepts, time management, and measurement skills for daily life.

Rationale: Enhanced numeracy skills enable individuals to handle money, keep track of time, and measure items vital for their daily routines.

Activities of Daily Living (ADLs):

Objective: To promote greater independence in performing essential daily tasks.

Rationale: Proficiency in ADLs enhances individuals' autonomy, self-care, and overall quality of life.

Vocational Training:

Objective: To equip individuals with vocational skills that enhance their employability, personal development, and active citizenship.

Rationale: Vocational training empowers individuals to contribute to society, gain financial independence, and lead fulfilling lives.

Post-Intervention

Sangay demonstrated notable improvements in various aspects of his life. He began to socialize more actively with his friends, exhibited minimal absenteeism, and displayed enhanced proficiency in reading and writing. Furthermore, Sangay's prevocational skills showed improvement, along with positive developments in his moral values, attitude, and behavior.

From the parents' perspective, they expressed a high level of confidence and satisfaction with the interventions that were implemented. They shared positive reflections about their child's progress and development.

Teachers also shared a positive outlook regarding the intervention, deeming it timely, appropriate, and highly beneficial. Notably, there was a transformation in the child's attitude towards school, as Sangay displayed a newfound willingness to learn, continue his education, and develop skills that would contribute to his long-term sustainability and success.

Sangay's case exemplifies the importance of tailored interventions for children with intellectual disabilities within challenging familial and socioeconomic contexts. While parents hold expectations of academic success, Sangay's evolution toward vocational skills showcases the potential for alternative paths to self-improvement. The institution's efforts to develop both academic and vocational skills contribute to Sangay's newfound confidence and positive attitude. This case underscores the significance of understanding individual capabilities and nurturing them accordingly.

Discussion:

Teacher's Feedback and Sangay's Response: Observations during the intervention sessions reveal Sangay's increased confidence and willingness to engage. His initial vulnerability and shyness are noted, contrasting with his current positive attitude.

Teachers aim to establish a small business for Sangay, highlighting a shift towards vocational skills. Sangay's feedback indicates a sense of personal growth and a heightened motivation to improve. According to the teacher, "With the introduction of engaging activities and an emphasis on skill development, Sangay Dorji has displayed a newfound interest in attending school regularly."

Case 3

Lachimi Rai is a charming and adorable person who radiates cheer despite her challenges. She is a resilient 20-year-old woman and the beloved daughter of Mr. Kamal Bhadur and Jas Maya Rai. Lachimi Rai grapples with Spastic Quadriplegia Cerebral Palsy, the most severe variant affecting her arms, legs, torso, and face. Her condition mandates ongoing treatment and unwavering support throughout her life. Despite facing the profound challenges, Lachimi's spirit remains unwaveringly cheerful. While her elder sister and younger brother diligently attend school, Lachimi has not had the opportunity due to her condition. However, her passion for learning shines brightly, as she eagerly seeks knowledge and yearns to explore new horizons despite life's limitations. Lachimi's story is a testament to the human spirit's enduring capacity for optimism and the pursuit of personal growth, regardless of the obstacles in one's path.

Background details

Kamal and Jas Maya once led a contented life in the small village of Lhaling, nestled within Bhutan's remote Dagana district. This close-knit community, comprising fewer than 20 households, thrived on the simplicity of rural living. The couple's sustenance derived from tending to their small plot of land, engaging in subsistence farming as their primary livelihood. Alongside their agricultural pursuits, they raised a handful of goats and cattle, a common practice shared with their neighbors. In the heart of this idyllic

village, Kamal and Jas Maya epitomized the essence of rural life, finding fulfillment and happiness within the rhythms of nature and the bonds of their tight-knit community.

Challenges/Issue

Kamal and Jas Maya's life took a challenging turn when they made the difficult decision to uproot themselves from their ancestral village in Lhaling to relocate to Thimphu, the bustling capital city of Bhutan. Their motivation was rooted in the profound love and commitment they held for their daughter, Lachimi, who required specialized care and support due to her cerebral palsy and quadriplegia. In Thimphu, they found access to essential resources for Lachimi's unique needs, including the presence of dedicated social workers.

However, this move brought its own set of hardships. Illiterate and without formal education, both Kamal and Jas Maya struggled to secure stable employment. Initially, they labored as daily wage workers, scraping together meager earnings. Yet, as Lachimi's condition worsened, her mother, Jas Maya, had to assume the role of her primary caregiver, further diminishing the family's income. Tragedy struck again when Kamal suffered a spinal cord injury, rendering him physically unable to find work. Fortunately, a compassionate business owner offered him employment as a security guard at an auto repair workshop, providing a lifeline for the family's financial stability. Despite their adversities, they continued to support Lachimi's elder sister's education in India, while making ends meet with their limited resources. Kamal and Jas Maya's unwavering resilience in the face of adversity showcases their enduring love for family and their remarkable strength in overcoming challenges.

Interventions

Due to the child's wheelchair-bound condition and the parents' financial constraints, intervention necessitated a home-based approach. Their residence, situated near the Wangchu river, consists of a modest zinc-sheet hut. While the dwelling lacks sufficient ventilation, it is impeccably clean. Upon entry, one encounters the living room where Laxmi, recently aided by an ABS tutor in acquiring a wheelchair, now sits. The toilet is

located some distance away from the house, emphasizing the family's challenges in ensuring their child's well-being within the constraints of their living situation.

Due to her quadriplegia caused by Cerebral Palsy, Lachimi's use of Assistive Technology has become crucial. In this initiative, Ability Bhutan Society has provided her with a tablet designed for educational purposes. Collaborating with Lachimi's parents, the facilitator devised a wide range of interventions encompassing literacy, diverse skills, psychomotor abilities, and communication and interaction skills. These interventions were carried out for three hours each week, spanning a one-year duration.

Interventions to build her Literacy and Numeracy skills

- To enhance Lachimi's literacy skills, laminated sheets containing images and corresponding words were employed. She engaged in a tactile activity, sticking the pictures to the matching words, which facilitated the connection between images and their written representations. This approach promoted visual recognition and word association.
- The tutor adopted an interactive approach to literacy by composing uncomplicated questions, such as "What is your name," and leaving spaces for Lachimi to write her responses. This exercise not only encouraged her to practice writing but also improved her comprehension and communication skills.
- Lachimi received personalized guidance and support to improve her writing abilities. The focus was on writing clearly with appropriate spacing and adhering to capitalization rules when necessary. These efforts aimed to make her writing more legible and structured.
- The use of printed pseudo-money served as a practical tool to introduce Lachimi to the concept of currency. This hands-on experience allowed her to understand the value and use of money, an essential life skill.
- To ensure meaningful learning rather than mere memorization, exercises involved matching words with pictures. This approach encouraged Lachimi to grasp the

context and meaning of words by associating them with visual representations, fostering a deeper understanding of language.

- Lachimi received instruction in fundamental numeracy skills, including the ability to count from 1 to 20. This laid the groundwork for her mathematical competency, providing her with a strong foundation for further mathematical concepts.
- Alongside counting, Lachimi was taught basic addition skills, equipping her with the ability to perform simple mathematical calculations. This not only expanded her numeracy skills but also facilitated problem-solving and critical thinking.

Interventions for Psychomotor skills

- Lachimi was given instruction on how to operate a Samsung tablet, with the goal of enhancing her digital literacy. Learning to open and navigate the device equipped her with a valuable skill for communication and education.
- The tutor provided support to Lachimi in writing her name accurately, focusing on proper spelling. This activity not only improved her handwriting but also reinforced her ability to identify and spell her own name correctly.
- To encourage independence, the tutor personally brought a water bottle with a straw for Lachimi. This allowed her to drink on her own without assistance. In contrast, using a cup would require additional support.
- Lachimi was engaged in an exercise that aimed to enhance her motor skills. This involved picking up potatoes and tossing them into a bowl on the other side. Her willingness to participate demonstrated her commitment to developing her motor skills.
- Lachimi actively participated in the tasks and was fully engaged in her learning process. Her enjoyment of these activities suggests that they were not only beneficial but also enjoyable for her, fostering a positive learning environment.
- The tutor utilized a laminated numeracy sheet to teach Lachimi. She accurately pointed to numbers, demonstrating her numerical understanding. Additionally, Lachimi held the pen in her left hand, indicating her emerging writing and fine motor skills.

- Lachimi displayed her ability to read a wall clock with both numbers and clock hands. When prompted, she could accurately state the current time, showcasing her aptitude for time-telling and numeracy skills.

Interventions to help build her Communication and Social Interaction skills

- Day-to-day conversations were initiated by the tutor to help Lachimi learn the basics of communication skills.
- The tutor shared compliments on Lachimi's beautiful smile to teach her how to acknowledge compliments and to learn social interaction
- Lachimi was also assigned to watch movie clips and encouraged to share her response to the movies.

Findings and Discussion

1. Lachimi's ability to open and navigate a Samsung tablet has significantly contributed to her digital literacy. She can now effectively access technology for communication and educational purposes. Lachimi's active participation and enjoyment of tasks reflect a positive learning environment. These activities are not only beneficial but also enjoyable for her, fostering a conducive atmosphere for learning.
2. Lachimi has developed a basic foundation in reading and understanding written words, which holds significant potential for various aspects of her life. Her active participation in writing exercises and answering questions has not only improved her writing skills but has also advanced her comprehension and communication abilities. She is now better equipped to express herself in written form and respond to inquiries effectively. Exercises involving word-picture associations have fostered a deeper understanding of language. The support received for writing her name with correct spelling has resulted in her improved ability to identify and spell her name accurately.
3. Instruction in fundamental numeracy skills, such as counting and addition, has laid a robust foundation for Lachimi's mathematical competency. These skills are pivotal for her everyday tasks and future mathematical learning. Practical use of printed pseudo-

money has equipped Lachimi with essential financial literacy skills. She now comprehends the concept of money, its value, and its practical use in daily life.

4. Participation in the potato-picking and tossing exercise has notably improved her fine and gross motor skills. Her dedication to these activities demonstrates her commitment to skill development. The provision of a water bottle with a straw has empowered Lachimi to drink independently, fostering her self-sufficiency and reducing her reliance on assistance. Her accurate pointing to numbers and ability to hold a pen in her left hand illustrate her numerical understanding and emerging fine motor and writing skills. Lachimi's ability to read a wall clock and state the exact time showcases her proficiency in time-telling and numeracy skills.

5. Engaging in day-to-day conversations has significantly enhanced Lachimi's ability to express herself, respond to inquiries, and actively engage in conversations. Learning to acknowledge compliments has taught Lachimi how to interact socially and respond to positive feedback, which has bolstered her social skills and self-esteem. Watching movie clips and sharing her responses has markedly improved her ability to express thoughts and feelings. This has contributed to the development of her communication skills and encouraged active participation in discussions.

Case 4

Sonam Choki, a 19-year-old with a remarkable spirit, faces unique challenges in life. Born with comorbid conditions including Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), and Down syndrome, Sonam's journey has been characterized by resilience and determination. Despite dropping out of school, she exudes a heartwarming enthusiasm for learning. Hailing from a family of nomadic herders, Sonam is the middle child, with an older brother and a younger sister. Financially sound through their animal product-based income, her parents are loving but recognize the importance of ongoing support in her daily life.

Challenges/Issues

Sonam Choki faces a multitude of challenges in her daily life due to her comorbid conditions. Her delays in social skills make communication inconsistent, often depending on her mood and emotions, leading to isolation. Her irregular sleep patterns and reluctance to engage in household tasks create additional strain for her parents. At 19, she struggles with personal hygiene, daily living skills, and menstrual hygiene, requiring constant assistance. Furthermore, her lack of awareness about potential physical harm due to opposite-sex attraction puts her at risk. Sonam cannot be left unattended, demanding constant supervision when her parents need to leave. Accessing education is also a significant obstacle, as she requires daily escort to school or at-home care, further highlighting the array of challenges she faces. She faces vulnerabilities both in the physical and social aspects of her life. Her challenges extend beyond daily living skills to include functional literacy. The child's interactions are primarily confined to her parents and siblings, hindering her ability to socialize with peers and neighbors. This isolation has hindered her capacity to build relationships and connect with others.

Intervention:

In the initial stages, Sonam received education through home visits by dedicated teachers. However, the logistical challenges of carrying educational equipment and Teaching Learning Materials (TLMs) to her residence prompted a shift in the intervention approach. As a result, the education and intervention were transitioned to the Special Education Needs (SEN) room. The child's learning needs were addressed on an individual basis to provide tailored support.

- The intervention encompassed several critical components to enhance the child's skills and knowledge. Initially, basic reading skills were a focus, which included learning the alphabet, days of the week, and reading the clock. These foundational literacy and numeracy skills are essential for daily life.
- Furthermore, the child was taught practical life skills, such as money counting, time management, and measuring items relevant to their daily routines. These skills aimed to enhance the child's independence and ability to navigate everyday tasks.

- Additionally, the intervention emphasized social development, covering basic greetings, etiquette, and lessons on health and hygiene. The child learned to distinguish between good and bad touch, promoting their personal safety and well-being.
- To promote self-sufficiency, the child received instruction in basic baking skills and laundry, empowering them to contribute to household chores and develop life skills that are essential for future independence.
- The intervention was structured according to a timetable, with the child receiving approximately six hours of support each week. This consistent and structured approach allowed for gradual progress in all the aforementioned areas, empowering the child to grow and develop to their full potential.

Findings and Discussion & Recommendations

1. **Improved Socialization Skill:** During the intervention period, Sonam demonstrated significant progress in her socialization skills. She was able to engage more effectively with her peers and teachers, which is a crucial step in her overall development. This improvement may enhance her ability to form meaningful relationships and integrate better into her community.
2. **Able to Greet Teachers:** One noteworthy outcome of the intervention was that Sonam developed the ability to greet teachers. This seemingly simple act reflects improved communication and social etiquette, which is an essential aspect of her growth. It signifies an encouraging step in her journey to becoming more socially adept.
3. **Improved Health and Hygiene:** The intervention also had a positive impact on Sonam's health and hygiene practices. This improvement is not only essential for her overall well-being but also for her integration into society. Good health and hygiene habits promote better self-care and enhance her self-esteem.
4. **Cooperation with Teachers:** Throughout the intervention, Sonam exhibited a cooperative attitude towards her teachers. Her willingness to engage and learn is a significant achievement. This cooperative behavior indicates her receptiveness to guidance and her ability to benefit from educational support.

5. **Parental Satisfaction:** Sonam's parents expressed satisfaction with the interventions provided. Their positive feedback highlights the tangible improvements they have observed in their child's development. Parental support and contentment are crucial factors in a child's progress.

6. **Teacher Feedback:** The teachers involved in Sonam's education found the interventions to be appropriate and beneficial. Their professional assessment underscores the effectiveness of the chosen methods and the positive impact on Sonam's growth. This alignment between teacher and parent satisfaction is a strong indicator of the intervention's success.

7. **Willingness to Transform and Develop Skills:** Perhaps one of the most promising findings is Sonam's willingness to transform and develop her skills. This intrinsic motivation is a key driver for personal growth and development. It suggests that with continued support and encouragement, Sonam has the potential to overcome challenges and achieve further progress in her life.

In summary, the findings indicate that the intervention strategies employed for Sonam have had a positive and significant impact on various aspects of her development, including socialization, health and hygiene, cooperative behavior, and overall willingness to learn and grow. The satisfaction of both parents and teachers reinforces the value of these interventions in supporting Sonam's journey towards greater independence and well-being.

Recommendations:

The discussion raises the question of children with intellectual disabilities potentially excelling in vocational skills rather than traditional academics. The educational institution provides facilities for laundry, baking, car washing, and painting. It is suggested that allocating resources and budget towards enhancing these vocational skills could better serve children.

Conclusion:

The four case studies, each involving individuals with diverse disabilities, displayed a strong commitment to enhancing their literacy, numeracy, psychomotor, cognitive, and social skills. Over the course of a year, tailored interventions were implemented, resulting in commendable progress across all aspects of their development. It can be inferred that the project's support not only benefited these four individuals but also yielded two notable outcomes. Firstly, it fostered collaboration between parents and facilitators in identifying suitable interventions for each case. Secondly, and perhaps most significantly, it showcased the project's scalability. With the right support and interventions, children with disabilities throughout the country have the potential to thrive and develop in various facets of their lives.

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