Inclusive Education for Students with Visual Impairments in Lao People's Democratic Republic: a Qualitative Study

Yangxia Lee[1], Tavee Cheausuwantavee[2*], Kelly Roberts[3]

1. Ratchasuda College, Mahidol University, Thailand
2. Ratchasuda College, Mahidol University, Thailand
3. Institute for Human Development, Northern Arizona University, USA

ABSTRACT

Purpose: *This study aimed to explore the perspectives of teachers, students and parents on practices used in inclusive education (IE) settings for students with visual impairments. Their perspectives were then used to create a proposed suitable inclusive education model for these students in the Lao People's Democratic Republic (Lao PDR).*

Method: *A qualitative study was designed. The 20 participants included teachers, parents and students with visual impairments. Data was collected through focus groups, in-depth interviews, and non-participatory observations.*

Results: *It was found that inclusive education has been prioritised in Lao PDR. However, special schools or centres are still needed to teach students Braille and enable them to complete grades 1 and 2 before entering inclusive primary schools in the neighbourhood.*

Conclusion: *An inclusive education policy exists, but guidelines for implementation are missing, and coordination and cooperation among stakeholders is poor. The inclusive education model proposed by the study consists of clear policy.*

Key words: *inclusive education, perspectives, visual impairments, disability, Lao PDR*

INTRODUCTION

The concept of inclusive education (IE) encompasses the ideal that every child has a fundamental right to education, has unique characteristics, interests, abilities and

* **Corresponding author**: Tavee Cheausuwantavee, Ratchasuda College, Mahidol University, Thailand, email: tavee126@hotmail.com,

learning needs, while supporting the idea that opportunities must be provided to secure inclusive education for all students with disabilities and special needs (United Nations, 2021). Through IE services students with disabilities have equal access to education which is founded on human rights and social justice (Mitiku et al, 2014). Inclusive education is inseparable from stakeholders including government, institutions of higher education, primary and secondary school leaders, educators, educational professionals, communities, and parents (Imaniah & Fitria, 2018; Okyere et al, 2019). In inclusive settings, students with disabilities are able to socially interact and develop relationships with their peers and do better academically than students in non-inclusive settings. This includes better performance related to social aspects, higher academic standards, and removal of the social prejudice that exists for people with special needs (McMillan, 2008).

However, many complex micro and macro challenges have been surrounding inclusive education for students with disabilities in both developing and developed countries. Micro challenges include teachers in primary schools who lack knowledge in working with students with special needs; lack of appropriate teaching skills; the absence of sufficient numbers of educational and rehabilitation professionals, and insufficient appropriate teaching media and resources. Macro challenges include a lack of participation of stakeholders; limited appropriate policies, strategies, and plans of action; poor provisions and enforcement of inclusive education policies; and, inadequate funding. Bubpha (2014) and Robiyansah et al (2020) opined that to bring about quality in education management for all, the government should reinforce the terms of policies: the development of better management systems, and promoting and continuously disseminating the importance and benefits of the concept; all issues concerning macro-level developments. The challenges of inclusive education are associated with negative attitudes towards persons with disabilities; the lack of confidence among parents regarding the capacity of inclusive schools to educate their children, often as a result of inadequate plans, facilities and a lack of adequate guidance and information services to support parents (Garuba, 2003). Sarao (2016) studied existing obstacles and challenges in inclusive education in India, with special reference to teacher preparation, and found the following: lack of time to prepare teachers for inclusion in general classes, lack of internship opportunities for teachers to learn about special children's education, inadequate strategies, and poor pedagogical guidance to educate students with disabilities.

From 1993 to 2009, Lao People's Democratic Republic (Lao PDR) implemented an inclusive education project supported by Save the Children Norway (SCN),

for students with disabilities. This project aimed to support the participation of all children in school, particularly students with disabilities, through the introduction of child-centred approaches to teaching and learning in 539 schools across the country. Grimes et al (2011) conducted an evaluation of this project and found that the new approaches were being effectively implemented by schools. However, significant challenges were also noted, including a lack of services and support for students with more complex needs and the risk of running a project with a beginning and an end, without having guarantees that implementation would continue.

The fourth Sustainable Development Goal mentions that States Parties should be committed to providing inclusive and equitable quality education at all levels to all people, irrespective of sex, age, race or ethnicity, and disability in order for these individuals to access life-long learning and exploit opportunities to participate fully in society (United Nations, 2015). The government of Lao PDR ratified the United Nations Convention on the Rights of Persons with Disabilities (CRPD) in 2009. A year later, the National Policy on inclusive education was promulgated by the Ministry of Education and Sports (MoES, 2011). Even the government recognised that education is a vital instrument in achieving a high quality of life and prioritised inclusive education for all its citizens. However, implementation has been challenging. There are only two special schools for the purpose of teaching Braille to students with visual impairments, giving them orientation and teaching mobility and daily life skills, and assisting them to complete grade 2 before entering grade 3 in inclusive primary schools nearby. These special schools are only situated in Vientiane, the capital of Laos. Special education facilities are available for children with disabilities but most special schools are located in urban centres (Garuba, 2003).

Even though primary education is compulsory in Lao PDR, statistics on students with disabilities have not been addressed in the Education Management and Information System (EMIS). Little is known about the effectiveness of inclusive education for students with visual impairments. A study conducted by Thoresen et al (2014) in a few representative provinces found that there were high needs for Lao PDR to improve the knowledge and skills at all levels and sectors in terms of the implementation and provision of education for children with disabilities.

However, it is interesting that even though there is yet to be pre-service teacher training on supporting students with visual impairments in Lao PDR, a few students with visual impairments were able to graduate from primary education

to higher education. The challenges are that inclusive education has not been truly rolled out in the entire country. As such, the assumption is that teachers in both inclusive primary schools and special schools have the necessary knowledge, skills, and experience in teaching students with visual impairments and could teach anywhere in the country in inclusive school settings. The situation may be different in different countries. It is therefore necessary that in studying the effectiveness of inclusive education in a local setting, local inputs, perspectives and experiences of both local people with and without visual impairments be considered.

Objective

Little is known about the existing inclusive education practices for students with visual impairments in primary schools in Lao PDR. This study explored the perspectives of teachers, students with visual impairments and parents, as well as existing practices of inclusive education for students with visual impairments, in order to develop an effective inclusive education model to support these students in primary schools in Lao PDR.

METHOD

Study Participants

There were 20 participants including 11 teachers, 5 students with visual impairments, and 4 parents who were selected through purposive sampling.

The inclusion criteria were:

Teachers - both with and without visual impairments, who taught students with visual impairments in inclusive primary schools and special schools for more than five years; Students with visual impairments – studying in grades 3 to 5 in inclusive primary schools; and,

Parents – whose children with visual impairments were studying in the inclusive primary schools and special schools, and who were willing to participate in this study.

Data Collection

Data was obtained through focus group sessions, in-depth interviews, and non-participatory observations (see Table 1).

The qualitative study data was collected through two-hour focus groups of three homogenous participants, i.e., a group of 7 teachers, a group of 5 students with visual impairments, and a group of 4 parents. Eight to ten guided questions regarding existing inclusive education practices, skills, and techniques of teaching and supporting students with visual impairments were used in the focus group discussions.

The forty-minute in-depth interviews with 4 teachers used guided questions similar to the ones used in the focus groups.

Lastly, non-participatory observations with eight dimensions, including classroom information, classroom activities, teaching techniques, teaching aids, assessment strategies, students' learning, and extracurricular observations, were conducted.

Table 1: Participant Characteristics of the Qualitative Study

Selected Participants	Numbers	Characteristics	Data Collection
Teachers (T1-T7)	7	- 3 females and 4 males - Taught at Phaxay inclusive primary school, Vientiane Capital Special School, the Light of Blind School	- Focus group - Classroom and school-based observations of extra-curricular activities
Teachers (T8-T11)	4	- 1 female and 3 males - Taught at Phaxay inclusive primary school, Vientiane Capital Special School, the Light of Blind School	- In-depth interview - Classroom observations
Students with visual impairments (S1-S5)	5	- 4 females and 1 male - Grade 3 to 5, aged 13-22 years old, studied at Phaxay and Nalao inclusive primary schools	- Focus group
Parents (P1-P4)	4	- 3 females and 1 male - Had a student with visual impairment who studied in Phaxay inclusive primary school and Vientiane Capital Special School	- Focus group

Data Analysis

The qualitative data were interpreted with analytic induction to create themes.

Ethics Approval

The study was approved by Mahidol University, Institutional Review Board (MU-SSIRB 2018/123-B2).

RESULTS

Positive Signs

Teachers' Perspectives on Inclusive Education

Teachers, who taught students with visual impairments in primary inclusive and special schools, participated in the focus group. They had a good understanding of inclusive education (IE) terminology in the context of Lao PDR.

> *"IE is meant to bring students with disabilities and ethnic students to study in the same class and same school with students without disability, without discrimination, both boys and girls, poor or non-poor students, by arranging the teaching and learning a bit specific as individual needs based on that type of need and disability" (T10).*

> *"Whatever students without visual impairment do, students with visual impairments can do as well, IE is where all types of students learn in the same classroom, same school and same curriculum and textbooks" (T3).*

These teachers had positive perspectives about placing students with visual impairments in inclusive schools.

> *"Teaching students with visual impairments cohort by cohort, such job makes me enjoy life professionally with never boring" (T1).*

> *"Students with visual impairments did not have barriers in inclusion as other disability groups because they were well prepared from the special school for two to three years, depended on their capacity before transferring into the inclusive school, especially in orientation, mobility and Braille" (T5).*

Parents' Perspectives on Inclusive Education

Parents who participated in the focus group preferred inclusive education because they found that their children studied well and fared better in the inclusive school.

The more time students with disabilities spent in regular classes, the more they were able to achieve as adults in employment and continuing education; this matched with the parents' perspectives.

> *"My son is the top student, each month he is number 2 or 3 top student in his class" (P3).*

Through inclusive education, parents believed that their children were able to spend time with friends without disability and were better equipped to live in real society. They noticed that their children had many friends and regularly interacted with children without disability.

> *"I hope as my child is in inclusive school, that he will be able to live independently when he has no more parents" (P4).*

> *"What I do for and invest in my child today, I never and will not call for return. I want my son to be himself, live independent when growing up and whenever without me" (P1).*

Students with Visual Impairments' Perspectives on Inclusive Schooling

Students with visual impairments' perspectives, as obtained from the focus groups, indicated that they liked inclusive school better because they study along with students without visual impairments; they have many close friends; their friends also help them in learning and in mobility; they have fun and are happy; they talk and play with friends; they enjoy school; they are not lonely; they learn better as their friends are helping them. Moreover, they also have the opportunity to help their friends, for example, by telling their friends to listen to the teachers, to obey them, not to be noisy and to concentrate on studying.

> *"We have best friends, both boys and girls, so we ask them directly to help, no need teachers to assign" (S2).*

> *"In the special school, everyone could not see, everyone just touched, sometimes someone crashed other persons or crashed the pole or wall because of unseeing, nobody could mutually help because everyone was in the same situation, it was so quiet and lonely, day and time were so long" (S1).*

Inclusive Education for Students with Visual Impairments in Primary Schools in Lao PDR

Even though inclusive education is prioritised in Lao PDR, the special school system is still used to prepare students with visual impairments to join neighbouring inclusive primary schools.

Four of the 5 students with visual impairments who participated in the focus group discussion were girls and one was a boy. They were studying in grade 3, grade 4 and grade 5, and were between 13 and 22 years of age. Due to their late enrolment, these students were mature in comparison to their classmates without visual impairments who were between 6 and 10 years of age. Age at admission and joining time in the Light of Blind School – a special school - is flexible for students with visual impairments; whenever they apply to be admitted they can start from pre-schooling. Grade 1 and grade 2 students with visual impairments in Vientiane Special School start their education from September to May each year to complete the standard curriculum of the Ministry of Education and Sports (MoES).

> *"There is no limitation of years for preparation. It depends on the student with visual impairments' learning capacity and his/her learning assessment results" (T10).*

Voluntary Peer Support without Systematic Disability Support Services

Peer-to-peer learning is applied in inclusive primary schools. Students with visual impairments always need support from their classmates, so each class teacher nominates at least one top student without visual impairment to be a buddy to students with visual impairments. Students with visual impairments always sit next to the class topper who is his/her buddy. During classes, the top students finish their exercises early and help the students with visual impairments, so that the latter are able to stay abreast of the classwork. Moreover, the buddy supports and accompanies students with visual impairments in playing, mobility and extra-curricular activities. Seating arrangements for every student with visual impairment are in the first or second row of the tables next to the teacher's table and close to the blackboard. In Vientiane Special School and the Light of Blind School, due to the small number of students, the classroom is organised with teachers and students sitting face-to-face at a table. Students with low vision always help their classmates who have a total visual impairment.

Challenges

Policy Endorsed but Slow Practical Implementation

In Lao PDR, the National Policy on inclusive education was endorsed in 2010 and the National Strategy on inclusive education was promulgated in 2011, but

guidelines for implementation have not yet been developed. This causes a gap in implementation, especially regarding budget allocations and appropriately-trained human resources development in support of inclusive education. In general, inclusive education is mainstreamed into the educational plans, but there is a shortage of professionally well-equipped personnel or experts, and a structure that is dominated by macro-level thinking and lacks attention for the more micro-, primary school level. The project method of promoting and introducing inclusive education has been risky in terms of its continued implementation, i.e., sustainability is at stake.

No pre-service Teacher Training for the Education of Students with Visual Impairments

Special education, inclusive education and providing support to students with disability, including those with visual impairment, are not part of the majors offered in higher education. Pre-service teacher training in the country does not as yet exist. Teachers in inclusive primary schools and special schools in Lao took intensive in-service training in Braille, and in teaching and supporting students with visual impairments. They were originally trained by the Association for the Blind and the Inclusive Education Project supported by Save the Children Norway (SCN). Often teachers also learn to work with students with visual impairments through trial and error, i.e., based on their own commitment and experiences.

> *"In teaching students with visual impairments or those who are blind, I am the key media, talk a lot or speak over the time because we do not have materials and equipment to support"* (T4).

Low Quality and Shortage of Teaching and Learning Materials to Support Students with Visual Impairments

The equipment and teaching materials to support and facilitate learning by students with visual impairments in inclusive primary schools are poor, basic or low-tech, simple and out of date. Only stylus and slates are being used. Abacuses are made from bamboo by teachers. Used A4 paper and unused calendars that are collected by teachers are used for writing Braille.

> *"There is no modern technology support at all, Braille typewriter is out of date and broken, no spare part, thus no more using"* (T1).

Almost all materials are pictures drawn with elevated and enlarged lines and are hand-made by teachers and students without visual impairment. Sometimes teachers bring or ask students without visual impairment to bring real objects from home, for example, an apple, tomato, leaves, flowers, which are especially useful for interaction during the drawing hour. There is no manual or computer enlarged assistance available to support students with low vision.

Rare Communication and Collaboration between Teachers and Parents of Students with Visual Impairments and among Relevant Stakeholders

Parents who live in the Vientiane Capital transported their children with visual impairments to school and back every day. They did not have regular contact with the teachers and had never attended any meetings with them. The parents mentioned that they were willing to contribute both materials and cash to the inclusive primary schools.

> *"I need schools to call for the meeting; I am pleased to contribute cash for gasoline for daily driving our children with visual impairments to study grade 1 and 2 at the new special school which was about 10 kilometers far from the central city" (P1).*

Parents who lived in the provinces rarely contacted teachers because of the distance and high poverty levels. Only teachers sometimes called parents to pick up their children from the provincial public bus station for the summer vacation break.

The relevant internal departments and the MoES are not involved, other than attending the national inclusive education thematic working group. Textbooks converted to Braille are still the responsibility of the Association for the Blind. However, the MoES does not share information about textbooks that are needed and this causes delay in the implementation of reforms.

No Standard Learning Assessment for Students with Visual Impairments

Students without visual impairment and students with visual impairments are assessed in the same way. Both groups of students are given a monthly quiz or test. All assessments are handwritten. Students with visual impairments write their answers and solve mathematics problems in Braille. To graduate to grade 3 in neighboring inclusive schools, students with visual impairments must be able to read Braille properly, and for mathematics, they should be able to use four

formulae (+, -, x and ÷), complete the national standard curriculum for grades 1 and 2, and pass the assessment. Thus, it depends on the academic ability of each student with visual impairment to graduate to the next level. Some of them needed a 2-year preparation period, or even longer, in a special school before they could graduate to grade 3 in a primary school.

Monthly quizzes and semester and final exam questions are not converted into Braille. The grade 5 final exam is an annual exam conducted throughout the entire country. Teachers who know Braille are invited to be part of the exam committee for the grade 5 final exam. Their role is to read the questions to the students with visual impairments who are given 20 to 30 additional minutes per subject. For some years students with visual impairments sat with students without visual impairment; at other times they were separated in a different room or centre. It all depended on the number of students with visual impairments who were writing the exam. In case they failed, they had to take an oral quiz.

> *"In case any students with visual impairments failed, they could take a second round exam that could be written or oral "(T5).*

No Special programme for Daily Activities

There are no extra-curricular activities, except for hoisting the national flag every Monday morning, physical exercise and teeth-brushing during every morning break and cleaning of classrooms. Students with low vision can participate in classroom- and school-cleaning activities, such as sweeping the classroom floor, cleaning paper trash around the school, wiping the tables and chairs, bringing drinking water to teachers and cleaning the toilets. But students with severe and multi-disabilities or physical disability are not involved at all. They just sit in the classroom quietly.

> *"The physical education practice, some exercise positions I could not do because my personal physical was not strong enough, so only 2-3 simple positions I could apply, I was excused"(S5).*

Some students with visual impairments participate in playing music, take part in the choir in their classrooms and at school, and teach singing to their friends without visual impairment.

DISCUSSION

Lao PDR has made a good start in developing a policy for inclusive education for students with visual impairments in some primary schools. Inclusive education is based on a social model which encourages learners with disabilities to be included in mainstream schools in order to become active members of their society (Hooker, 2007; Olinger, 2013; Franck & Joshi, 2017). In this study, teachers and parents of students with visual impairments had positive perspectives about inclusive education. This is in line with previous studies that parents, teachers and school administrators have positive perceptions about inclusive education. However, other studies found that there are some teachers and people in society who have negative ideas about inclusive education, and refer to children with disabilities who face obstacles in inclusive school settings (Thoresen, et al, 2014; Su et al, 2020). In the current study, while inclusive education evoked positive attitudes, it should be noted that special schools/classes in Lao PDR are still necessary to support and prepare students with visual impairments for inclusion.

The study also showed that despite having no systematic disability support services, there has been voluntary peer support for students with visual impairments. Some students with visual impairments in Lao PDR were able to graduate without applying for the individualised education plan (IEP). A few students with visual impairments were even top students in their classes. A student peer-to-peer approach was used, which is positive in terms of cohesion and solidarity. However, in terms of academic performance, it might be a burden, or even a barrier, for students without visual impairments as it will mean a reduction in their learning time. Also, reading aloud to students with visual impairments may disturb fellow students and may affect their concentration, which would impact their quality of learning. Peer support could provide multiple benefits and could be implemented feasibly and acceptably in inclusive classrooms among students with and without disabilities (Tuttle & Carter, 2020). Josua et al (2022) found that in inclusive schools in Namibia, the seats in the front row were occupied on a first-come first-served basis. No seats were reserved for learners with low vision, which is in contrast to the inclusive primary school in Lao PDR where first-row seats next to the teachers and blackboard are arranged and prioritised to students with visual impairments.

In spite of all the support from stakeholders for inclusive education for students with visual impairments in primary schools in Lao PDR, there are several challenges as well. Challenges include the absence of professional special needs

training for teachers, which leads to the lack of suitable knowledge and skills to teach, assess and support students with visual impairments; unavailability of appropriate and good quality learning materials and assistive technology; and, rare communication and collaboration among teachers, parents, and relevant stakeholders. Many countries, particularly low- and middle-income ones, face similar challenges (Lamichhane, 2016; Habulezi et al, 2016; Franck & Joshi, 2017; Nemirova & Kantor, 2020; Ajuwon et al, 2020; Magumise & Sefotho, 2020). It shows that although inclusive education policy has been endorsed, implementation has been ineffective. It is a discrepancy between policy as ideology and practice as the reality that usually occurs (Cheausuwantavee & Cheausuwantavee, 2012; Cheausuwantavee & Suwansomrid, 2018).

The successful implementation of inclusive education requires teamwork, along with communication, a professional community of teaching staff, and cooperation among stakeholders in general and more especially with special education providers (Olinger, 2013; Nemirova & Kantor, 2020). At the time of this study in Lao PDR, rarely was there communication and cooperation between teachers of the inclusive and special schools with parents, even those who were living in Vientiane Capital.

Teachers face many challenges including lack of special needs training; lack of appropriate preparation; rare receipt of upgraded information related to teaching students with visual impairment; lack of supervision by qualified and experienced teachers; limited guidelines, and limited technical and financial support to primary inclusive schools in Lao PDR. Classroom teachers reported they often felt that they were not prepared to work with children with disabilities (Olinger, 2013). The lack of special education experience and training in inclusive practices may have had a profoundly negative effect on teacher perspectives on inclusion and students with special needs. Obstacles to the implementation of inclusive education in terms of teachers' capacity strengthening were the lack of continuous workshops, seminars, projects, and internships for special educators; and a lack of adequate pedagogy and pertinent strategies to educate students with special needs (Sarao, 2016; Nemirova & Kantor,2020).

The absence of suitable knowledge and training in IE among teachers and educational providers will lead to low confidence and ambivalence among both teachers and parents to support students with visual impairments. Thus, capacity building of those stakeholders should be considered as being of utmost importance (Habulezi et al, 2016; Ajuwon et al, 2020; Magumise & Sefotho, 2020).

On the basis of the findings from this study, the following recommendations are made:

1. The MoES should review the National Strategy on IE and develop practical IE guidelines by involving relevant stakeholders, including parents.
2. Curriculum modification and improvement of assessments of students with visual impairments need to take place.
3. Screening is significant for every learning assessment.
4. Seating arrangements in classrooms for students with low vision should be a priority.
5. Developing and providing appropriate extra-curricular activities for students with visual impairments will help avoid the discrimination and loneliness they often experience.
6. Teachers in inclusive and special schools should be trained in inclusive education, Braille, and techniques to support and teach students with visual impairments
7. Data on students with (visual) impairments should be collected as part of the Education Management and Information System (EMIS) for planning and budgeting.
8. Special schools/classrooms are still needed in Lao PDR. To be cost-effective, existing special schools should be transformed into demonstration schools and resource centres where teachers can get intensive training during summer vacation. Such special schools can contribute to scaling up inclusive education for students with visual impairments in other provinces.
9. Students with visual impairments and students without visual impairment should be prepared for inclusion, to reduce and eliminate stigma, physical and verbal bullying. This can lead to mutual acceptance.
10. Effective network mechanisms for communication and cooperation among teachers and relevant stakeholders, including parents, should be facilitated.
11. This study did not give an in-depth description of the process of transition from special schools to inclusive primary schools. Therefore, further research could emphasise the importance of improving the transition process.

12. The proposed IE model was developed by drawing on the lessons learned from other researchers' IE models, teachers' existing practices, and participants' perspectives and attitudes. Fourteen IE experts validated the study. However, further studies as well as piloting of this model is needed.

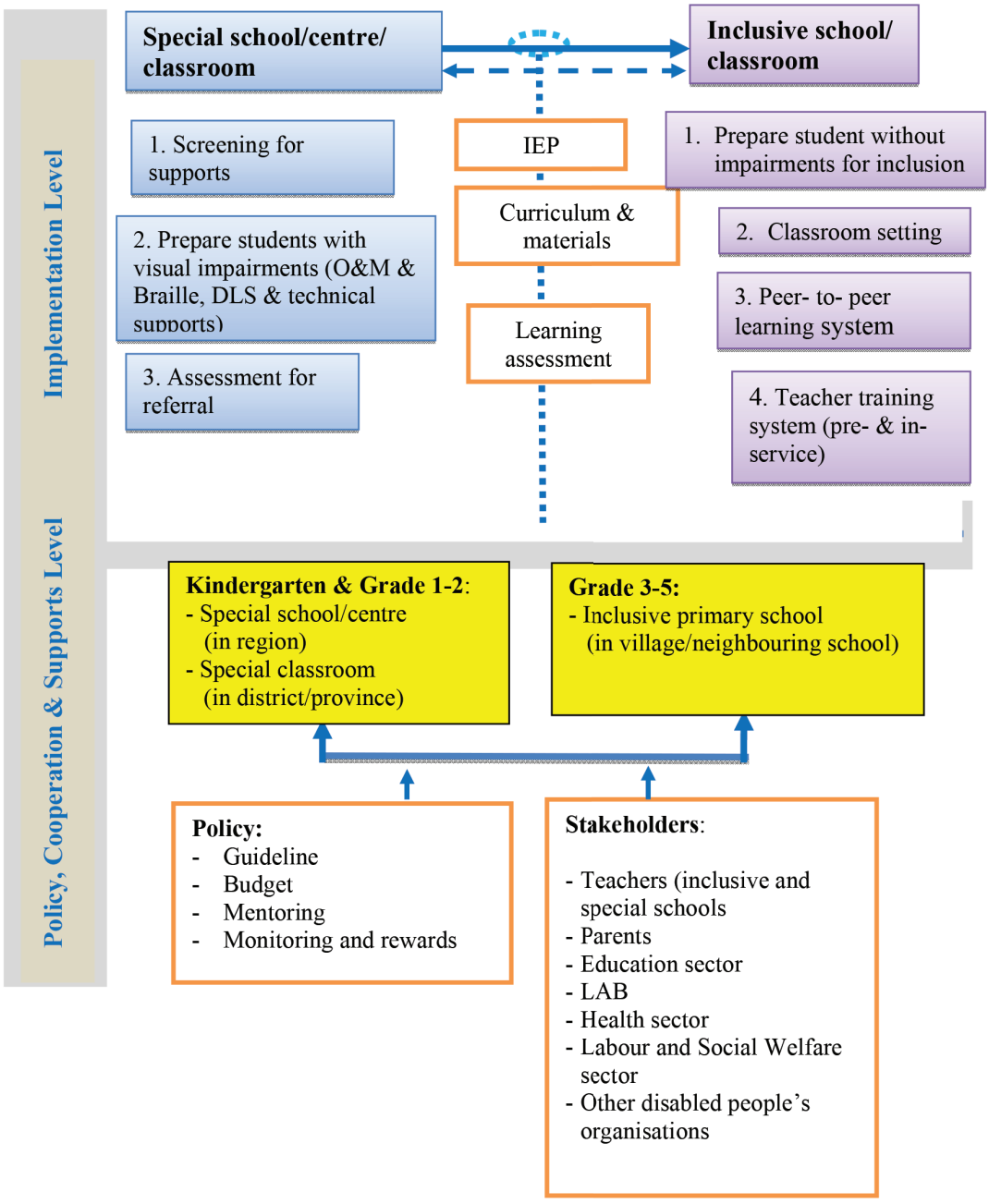
Based on a comprehensive literature review of the inclusive education models of Vorapanya (2008), Salend (1990), Mitchell (2015) and Robiyansah et al.(2020), the current authors have synthesised the most frequent elements of those models with the qualitative findings of the current study and propose an IE model to support students with visual impairment in primary schools in Lao PDR (see Table 2 and Figure 1).

Table 2: Key Elements of IE Model for Students with Visual Impairments among Literature Review, Study Findings and Proposed Effective IE Model in Lao PDR

Key elements of IE model for students with visual impairments from literature review	Key elements from this study findings	Key elements of proposed effective IE model for students with visual impairments in Lao PDR
IE policy is one priority, needs access to national budget	IE for students with visual impairments was accepted, policy existed but its practice was a challenge, and limited national budget	Taken IE policy into practices and expanded IE into the provinces. Practical guidelines to be developed systematically for students with visual impairments' education with appropriate budget
Screening and assessment at schools of three kinds, such as observation, using testing protocols and interviews with parents	There was no screening and assessment system in schools, except recognised visible disabilities	Early grade screening and assessment in all schools, it needs cooperation between parents, education and health sectors
Preparation of both students with visual impairments and students without disabilities	Preparation of students with visual impairments, special schools were required for this	Special schools or centres prepare students with visual impairments in Braille. Students without disabilities should be instilled with positive attitudes toward students with visual impairments
IEP	There was no IEP use in the inclusive primary schools for students with visual impairments	IEP should be applied for progress and improvement of needs

Teachers were the heart of the IE for students with visual impairments , teachers claimed for training and supports	There was no pre-service teacher training on teaching and supporting students with visual impairments	In-service teacher training to be regular and pre-service teacher training to be set up for sustainability and being able to expand to the provinces.
Curriculum adaptation for students with severe visual impairments	There was no adapted curriculum for students with visual impairments in Lao PDR but some lessons were modified by teachers' decision	Standard of substituted lessons to be determined
Teaching and learning materials to facilitate teachers and support students with visual impairments	Shortage and poor teaching and learning materials in inclusive primary schools, most were hand- made and basic, developed by students without disabilities or teachers who brought real materials or objects from home	Budget to be allocated for teaching and learning materials to support students with visual impairments in inclusive primary schools
Stakeholders' communication, cooperation and support including parents and students with visual impairments	Limitation of communication, cooperation and support from relevant stakeholders	Mechanism of stakeholders' communication, cooperation among education administration, teachers, LAB and relevant sectors to be improved
NA (No more mentioned)	Peer- to- peer studying was popular in the inclusive primary school for students with visual impairments	Peer- to- peer studying to be kept going for learning and cohesion since early age

Figure 1: A Proposed Effective IE Model to Support Students with Visual Impairments in Primary Schools in Lao PDR



STUDY LIMITATIONS

The small sample size was a limitation. Very few students with visual impairments access education each school year. During the period of data collection, there were only four students with visual impairments who were in grade 3, grade 4 and 5.

Also, there are only two inclusive primary schools that accept students with visual impairments in Lao PDR. Unfortunately, teachers of one inclusive primary school participated only in the quantitative data collection and refused to participate in the qualitative data collection.

CONCLUSION

In summary, teachers from the primary school level up to the university level exhibited positive perspectives toward inclusive education for students with visual impairments. All the same, placement of a student with disability into a regular classroom is challenging. There is a policy that endorses inclusive education but there are many challenges in terms of implementation. To expand education for students with visual impairments in Lao PDR, effective IE models and practical guidelines are needed, and in particular, pre-and in-service teacher training in order to help teachers provide specific support to students with visual impairments. Cooperation and communication among teachers, parents, and other relevant stakeholders need to improve.

ACKNOWLEDGEMENT

The authors would like to thank all the participants who contributed their valuable time and information to this study. This study is part of the thesis - "An inclusive education model to support students with visual impairments in primary schools in Lao People's Democratic Republic" - which is a requirement for the Doctor of Philosophy Programme in Quality of Life Development for Persons with Disabilities, at the Faculty of Graduate Studies, Mahidol University, Thailand. The first author was supported and funded by Mahidol – Norway Capacity Building Initiative for ASEAN (CBIA). This manuscript is original, not previously published, and not under concurrent consideration elsewhere.

REFERENCES

Ajuwon P, Chitiyo G, Onuigbo LN, Ahon AT, Olayi JE(2020). Teachers' attitudes towards inclusion of blind or partially-sighted students in secondary schools in Nigeria. Disability, CBR and Inclusive Development, 31(2), 33-51. http://doi.org/10.47985/dcidj.370 https://doi.org/10.47985/dcidj.370

Bubpha S (2014). Models of inclusive education: One size not fit all. International Journal of Technology and Inclusive Education, 3(2), 328-344. https://doi.org/10.20533/IJTIE.2047.0533.2014.0042 https://doi.org/10.20533/ijtie.2047.0533.2014.0042

Cheasuwantavee T, Suwansomrid K(2018). Disability law and policy in Thailand: An ideal and reality in the past decade. Journal of Ratchasuda College for Research and Development of Persons with Disabilities. 14, 87-103. https://rs.mahidol.ac.th/rs-journal/vol.14/007.pdf

Cheusuwantavee T, Cheusuwantavee C (2012). Rights, equality, educational provisions and facilities of students with disabilities in Thailand: Legal and practical perspectives in the past decade. Disability, CBR & Inclusive Development Journal, 23(1), 70-91. https://pdfs.semanticscholar.org/53ba/35cb0f0d108dbad28f029ff0941730b169c2.pdf https://doi.org/10.5463/dcid.v23i1.83

Franck B, Joshi DK (2017). Including students with disabilities in education for all: Lessons from Ethiopia. International Journal of Inclusive Education, 21(4), 347-360. doi.org/0.1080/13603116.2016.11973 20. https://doi.org/10.1080/13603116.2016.1197320

Garuba A (2003). Inclusive Education in the 21st century: Challenges and opportunities for Nigeria. Asia Pacific Disability Rehabilitation Journal, 14, 191-200.

Grimes P, Khomvanh Sayarath & Sithath Outhaithany (2011). The Lao PDR Inclusive Education Project 1993-2009: reflections on the impact of a national project aiming to support the inclusion of disabled students. International Journal of Inclusive Education, 15:10, 1135-1152, https://doi.org/10.1080/13603116.2011.55506 https://doi.org/10.1080/13603116.2011.555067

Habulezi J, Molao O, Mphuting S, Kebotlositswe MK(2016). Inclusive education and challenges of providing classroom support to students with blindness in a general education classroom at a school in Botswana. International Journal of Learning, Teaching and Educational Research, 15(1), 30-41.

Hooker M (2007). Concept note: Developing a model for inclusive education and assistive technology appropriate for teaching and learning contexts in developing countries. Global Schools and Community Initiative (GeSCI). Dublin, Ireland. https://www.yumpu.com/en/document/read/3335791/concept-note-developing-a-model-for-inclusive-education-gesci. http://www.moes.edu.la/moes/images/publication/IE_Strategy_Final_Eng.pdf

Imaniah I, Fitria N(2018). Inclusive education for students with disability. SHS Web of Conferences, 42(00039), 1-5. https://doi.org/10.1051/SHSCONF%2F20184200039 https://doi.org/10.1051/shsconf/20184200039

Josua ML, Haihambo KC, Likando G(2022). Challenges school management experience with inclusion of learners with visual impairments: A case of a secondary school in Namibia. Creative Education,13, 3559-3580. https://doi.org/10.4236/ce.2022.1311227 https://doi.org/10.4236/ce.2022.1311227

Lamichhane K (2016). Individuals with visual impairments teaching in Nepal's mainstream schools: A model for inclusion. International Journal of Inclusive Education, 20(1), 16-31. https://doi.org/10.1080/13603116.2015.1073374 https://doi.org/10.1080/13603116.2015.1073374

Magumise J, Sefotho MM (2020). Parent and teacher perceptions of inclusive education in Zimbabwe. International Journal of Inclusive Education, 24(5), 544-560. https://doi.org/10.1080/13603116.2018.1468497 https://doi.org/10.1080/13603116.2018.1468497

McMillan NM (2008). Inclusive education: The benefits and the obstacles. Master theses. Department of Education and Human Development of the State University of New York College at Brockport. https://soar.suny.edu/bitstream/handle/20.500.12648/5649/ehd_theses/445/fulltext%20%281%29.pdf?sequence=1&isAllowed=y

Mitchell D (2015). Inclusive education is a multi-faceted concept. Center for Educational Policy Studies Journal, 5(1), 9-30. https://files.eric.ed.gov/fulltext/EJ1128952.pdf https://doi.org/10.26529/cepsj.151

Mitiku W, Alemu Y, Mengsitu S (2014). Challenges and opportunities to implement inclusive education. Asian Journal of Humanity, Art and Literature 1(2),118-135. https://doi.org/ 10.18034/ajhal.v1i2.360. https://doi.org/10.15590/ajhal/2014/v1i2/54051 https://doi.org/10.18034/ajhal.v1i2.288 https://doi.org/10.18034/ajhal.v1i2.360

MoES - Ministry of Education and Sports (2011). National strategy and plan of action on inclusive education 2011-2015. Lao People's Democratic Republic Peace Independence Democracy Unity Prosperity: Ministry of Education and Sports. http://www.moes.edu.la/moes/images/publication/IE_Strategy_Final_Eng.pdf

Nemirova NV, Kantor V Z (2020). Research on the needs of school teaching staff within the framework of institution of inclusive education for the blind and visually impaired. Science for Education Today, 2020, 10 (3), 28-44. http://dx.doi.org/10.15293/2658-6762.2003.02 https://doi.org/10.15293/2658-6762.2003.02

Okyere C, Aldersey MH, Lysaght R(2019). The experiences of children with intellectual and developmental disabilities in inclusive schools in Accra, Ghana. African Journal of Disability, 24(8), 542. https://doi.org/10.4102/ajod.v8i0.542 https://doi.org/10.4102/ajod.v8i0.542 PMid:31392170 PMCid:PMC6676780

Olinger LB (2013). Elementary teachers' perspectives of inclusion on the mainstreaming education classroom. PhD dissertation. East Tennessee State University.https://dc.etsu.edu/cgi/viewcontent.cgi?article=2359&context=etd

Robiyansah EI, Mudjito M, Murtadlo M (2020). The development of inclusive education management model: Practical guidelines for learning in inclusive school. Journal of Education and Learning. 14(1), 80-86. https://doi.org/10.11591/edulearn.v14i1.13505 https://doi.org/10.11591/edulearn.v14i1.13505

Salend JS (1990). Effective Mainstreaming. New York: Macmillan.

Sarao T (2016). Obstacles and challenges in inclusive education in India with special reference to teacher preparation. International Journal of Education and Applied Research, 6 (1), 35-37. http://ijear.org/vol61/TEP2016/6-teena-sarao.pdf

Su X, Guo J, Wang X (2020). Different stakeholders' perspectives on inclusive education in China: Parents of children with ASD, parents of typically developing children, and classroom teachers. International Journal of Inclusive Education, 24(9), 948-963. https:// doi.org/ 10.1080/ 13603116.2018.1502367 https://doi.org/10.1080/13603116.2018.1502367

Thoresen S, Fielding A, GillieatS, Campbell N(2014). Facilitating disability inclusive development in Lao PDR by improving access to social and economic services: A scoping review of contexts and concepts. Paper presented at Ratchasuda International Conference on Disability, February 20-21, 2014. https://espace.curtin.edu.au/handle/20.500.11937/41250

Tuttle M, Carter WE (2020). Examining peer support arrangements for students with visual impairment. British Journal of Visual Impairment, 40(2), 1-18. https://doi.org/10.1177/0264619620972150 https://doi.org/10.1177/0264619620972150

United Nations (2015). Resolution Adopted by the General Assembly on 25 September 2015. General Assembly. https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf

United Nations (2021). UNICEF Strategic Plan 2022-2025. United Nations Children's Fund Executive Board, Second regular session 2021, 7-10 September 2021. Item 4 of the Provisional Agenda. https://www.unicef.org/executiveboard/media/7331/file/2021-25-Strategic_Plan_2022-2025-EN-ODS.pdf.

Vorapanya S (2008). A model for inclusive schools in Thailand. PhD dissertation. University of Oregon. https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/9487/Vorapanya_Sermsap_PhD_Fall08.pdf?sequence=1&isAllowed=y