



Designing a Micro-credential for the Professional Development of Early Childhood Education (ECE) Teachers of a Private School in Lao People's Democratic Republic (PDR)

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Abstract

This study aims to design a micro-credential for the professional development of select teachers at a private school that trains early childhood education in Lao PDR. Using reflective dialogue, the study presents the needs, issues, problems, and challenges of ECE and the teachers in Laos PDR. The results show that access, quality, and relevance of the current ECE programs need to be addressed. The results also show teacher quality in ECE in Laos needs to be improved. There are various challenges related to the pedagogical skills of teachers, classroom management, content knowledge of teachers, learning assessment, and professional development of teachers that need to be addressed. The study identified several microcredentials that could be offered to teachers to develop their knowledge, skills, and professional competencies to handle early childhood education classes. There is a need to provide relevant professional development for teachers in the areas of content knowledge, pedagogy, learning assessment, and instructional materials development.

Keywords: Micro-credential, preschool education. professional development of teachers

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1. Introduction

The challenges of the Fourth Industrial Revolution in education demands all education systems around the world to look for creative education strategies, programs, and directions. Creating educational innovations is becoming a necessity for educators and schools. Internationalization and globalization are also fast changing the landscape of education, creating a borderless and virtual education platform through the help of various information and communications

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technology (ICT) tools. The traditional approach to education is becoming obsolete and needs significant organizational and program reforms. The type of learners in schools is becoming diverse and coming from different educational backgrounds.

Article 26 of the 1948 Universal Declaration of Human Rights recognizes the right of everyone to education. Education, however, is not only right but a channel that leads to human development and provides more opportunities. The Sustainable Development Goal 4: *Ensuring Inclusive, Equitable, and Quality Education and the Promotion of Lifelong Learning Opportunities for All*, supports this right for everyone to be educated and recognizes several impediments and challenges to attaining universal education for all. These challenges are related to access, quality, and relevance. With these challenges, the quality of teacher education is an important concern to address. Schools need teachers who will create innovations and transform the educational system by instituting and implementing the needed reforms.

The goal of implementing education for all starts in early childhood education, where the education of young children is valued as the foundation of basic education. Theories in child development and pedagogy experts agree that much of brain development happens in the early childhood period of life. It is the level of education where communication skills, thinking skills, socialization, and creativity are developed. In early childhood education, with the help of teachers, young children are trained to develop a positive self-image, identity, confidence, habits of mind, and positive study habits. Furthermore, in early childhood education, young children are exposed to content areas where they learn concepts and skills related to science, social studies, and mathematics.

This paper aims to develop a micro-credential for the professional development of select teachers in early childhood education (ECE) in Laos PDR. The Laos PDR is a beautiful country with hard-working people. It is bounded by China (north), Vietnam (east), Cambodia (south), and Myanmar, and Thailand (west). Laos is a diverse country in terms of ethnicity and language. It is primarily an agricultural country. In terms of education, the government has brought primary education and adult literacy programs in all areas since 1975. Currently, UNICEF observed that Lao PDR has significantly improved in the areas of health and social outcomes for children and is making steady progress towards the realization of the Sustainable Development Goals (UNICEF, 2023), and early childhood education is one area that is being strengthened.

Early childhood education is the genesis and basis of lifelong learning. It combines education, health and nutrition, child protection and welfare, and child development through developmentally appropriate, culturally relevant, learner-

centered educational strategies. Recognizing the importance of early childhood education in the development of foundational and functional literacies, the education system should have efficient and effective early childhood education programs. The teachers in early childhood should be equipped with content knowledge, pedagogical skills, and ICT skills. Continuing education and professional development of ECE teachers is becoming a necessity. And new models for teacher development should be designed and implemented. In this paper, the use of microcredential is explored to provide professional development for teachers in early childhood education. The need for micro-credentials is driven by economic developments, changing job qualification standards, and students' demands for greater job options, growing skills mismatch, career advances, and career mobility (ICDE, 2019; Matkin et al., 2020; McGreal and Olcott, 2022; Ra, Chiin, and Liu, 2015).

The Higher Education Council of Ontario (2022) defines a micro-credential as a representation of learning awarded for completion of a short program that is focused on a discrete set of competencies. Moreover, the European Commission (2020) further defined micro-credential as proof of the learning outcomes that a learner has acquired after a short learning experience. They are considerably more specific than typical formal degree programs and short technical-vocational courses with particular competency development targets and minimal regulatory compliance. Micro-credential training or micro-degree programs (MDPs) have been utilized by many institutions to continuously upgrade or upscale the skills of the labor workforce and adapt to speedy technological and social changes.

Micro-credentials are described in this study as short-term, competency-based certificate programs that enable a person to show proficiency in a specific field (Randall et al., 2013). Micro-credentials, unlike "sit-and-get" certifications, are awarded based on demonstrated mastery of the subject matter, not just for attending a seminar. Micro-credentials are designed to be personalized in the sense that they provide the opportunity to create a practical learning journey based on interests, career goals, and skill gaps allowing learning to occur outside of traditional classrooms and educational contexts (Carey & Stefaniak, 2018; Matkin et al., 2020). Micro-credential is a 21st Century education strategy to address the growing needs of society in relation to various technological, scientific, economic, and cultural development. A microcredential is a short-term course or educational program that aims to capacitate every individual with the much-needed skills and competencies they need in various industries and in all walks of life.

Microcredential is designed to combine grit, experience, exposure, and training in a curriculum that is dynamic and progressive. Microcredentials are

progressive because they are practical, innovative, and responsive to the needs of the individual and society. Microcredentials are dynamic because they are not bound by any formal education structures where degrees are granted based on earned units and courses; microcredentials are not bound by time and content. A certificate is awarded based on learned skills and mastered competencies in specific areas and fields.

Microcredentials are either stand-alone or stackable. Stackable microcredentials can be credited to formal degrees at any level. The catch-up degrees are varied from certificates, diploma, bachelors, graduate and postgraduate from different disciplines, academic fields, and professional areas. Stand-alone microcredentials provide specific credentials on a particular field of study. They are designed basically for different skills and interest areas. In this paper, micro-credential is viewed as an innovative mechanism for the professional development of teachers in early childhood education. Due to the growing needs and demands of early childhood teachers, microcredentials can provide the skills, competencies, and knowledge every teacher needs for professional development.

In the field of education, Pawilen, Lubong, Fausto (2022) pointed out that micro-credential has the following advantages:

1. It provides an innovative strategy to keep learners at pace with changing developments in their discipline or work. Since every individual routinely needs to upgrade skills and competencies to continue being productive, micro-credential training is inherently inclusive.
2. Develops stackable skills, which means learners can create their own path of learning depending on the needs and qualifications needed for the demands of the society or industry. As it targets very specific skills or competencies, micro-credentials are naturally responsive to urgent needs and may be immediately applied.
3. They are ‘small’ programs that are easy to plan, schedule and implement compared to short or certificate courses. They also require minimal resources from providers and little time from clients, which can curb dropouts in typical 1-3 month technical-vocational programs, so it is accessible and relevant.
4. Takes less time to earn than a degree. A shorter time is required to learn a micro-credential is perfect for busy professionals, working parents, and students.

5. Provides the freedom for an individual to learn what they want without the financial and time commitments of a degree. They can earn a micro-credential in their own field of study or outside their major.

Micro-credentials provide several benefits to teacher education programs to meet the requirements of policymakers and accrediting organizations. They also give exciting options for programs to integrate technology that may boost teachers' technological capabilities (Foulger et al., 2017).

Micro-credentials are a relatively recent phenomenon in the Lao PDR. The urgency to be innovative, resourceful, and conscientious has prompted the researcher to study and invent using micro-credentials to provide programs that are both practical and innovative that will serve the continuing professional development of early childhood teachers. It offers a more flexible, shorter, modular, and affordable alternative to quality higher education endeavors, which is carefully designed to help professionals to reskill or upskill in their current professional field (Pawilen, Lubong, Fausto, 2022; Stefaniak & Carey, 2019).

2. Method

The purpose of this study is to develop a microcredential for the professional development of teachers in early childhood education (ECE) in the Lao PDR context as an alternative mechanism to promote inclusive education, professional development, and acquire needed and specific skills and competencies while increasing the mastery and competence of early childhood education teachers depending on the required skills in the community. The study focused on two objectives: (1) to analyze the needs, issues, problems, and challenges experienced by early childhood teachers, and (2) to identify micro-credentials that can be offered for the professional development of the early childhood education teachers.

This is a qualitative study that analyzed the educational and professional needs of teachers in early childhood education, which will serve as the basis for the development of a microcredential. It will use a *reflective dialogue* process as a method for gathering data. This method uses the power of dialogic discussion as a practical approach for gathering data. In a reflective dialogue, the researcher is an active listener and engaged facilitator. Reflective dialogue is purposive, dynamic, and reflective. As shown in Figure 1, the methodology involves three phases.

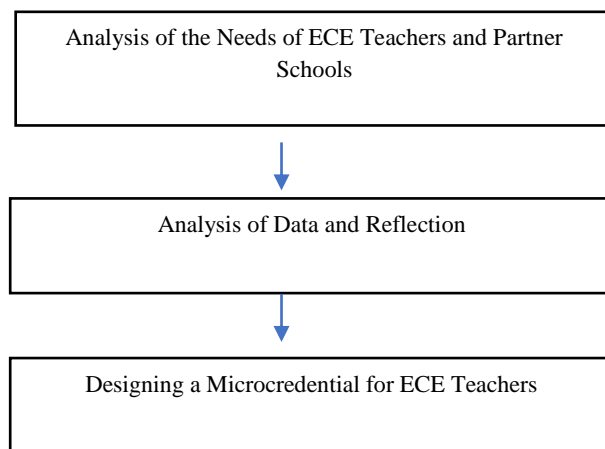


Figure 1. Research Methodology

Phase 1. Needs Analysis - Using the reflective dialogue as a framework for gathering data, the researchers engaged in a relaxed and free-flowing discussion with teachers and administrators. In this phase, several issues, problems, and challenges were identified, and relevant data on early childhood education and teacher education from various sources were presented.

Phase 2. Data Analysis – The second phase involves the analysis of data using codes and themes. Some of the statements of the respondents were also recorded and reported to strengthen and provide contextual discussion of the different themes. Once the themes were identified, the researcher reflected on the results to draw ideas and conclusions.

Phase 3. Designing of the Microcredential for ECE Teachers – The result of Phase 1 and Phase 2 leads to the design and development of a relevant and needs-based micro-credential for early childhood education teachers.

Research Locale

The study was conducted in Suntuosouk Language and Vocational Training Center (SLVC) located in the city of Vientiane, Laos PDR. The SLVC is a private school located in the capital city of Vientiane. It offers vocational courses, literacy programs, and teacher training courses to local private schools in Laos. The school is active in extension programs related to literacy development.

Conducting the research at SLVC is enough to provide the researchers and the readers with a glimpse of the state of preschool education in the country.

Research Participants

The participants of this study are selected using the purposive sampling method. The participants include 2 administrators, 5 teachers, and 2 staff of SLVC. They have been in the school for more than five years, they are active in coordinating with partner schools, and they have expressed interest in expanding the program offerings of the school not only in Lao PDR but also in other nearby countries like Cambodia, Thailand, and Vietnam.

3. Results

The results of the study are clustered based on the 3 research questions.

1. What are the needs, problems, and challenges experienced by early childhood teachers?

The result of the focus-group discussion with the teachers and administrators of Santisouk Language and Vocational Training Center (SLVTC) clarifies the state of early childhood teachers in Lao PDR. Based on the data gathered, not all teachers are qualified to teach ECE. For example, in SLVTC, only about 23% of preschool teachers have completed formal pre-service education, whereas the vast majority have not. As a result, many teachers of ECE do not have the skills necessary to give their learners a solid foundation for learning. ECE teachers in the Lao PDR face the challenge of working with limited funds and materials. There is a severe scarcity of books, toys, and other teaching aids in many ECE classrooms and centers due to the government's underfunding of the field. According to the School Director of the Center, the low status and low wages of early childhood educators in the Lao PDR are major roadblocks. This affirmed the UNICEF 2018 report that in Lao PDR, many teachers in Early Childhood Education (ECE) schools were paid very low and were rarely recognized for their important contribution. Thus, this leads to low morale, excessive turnover, and a lack of properly educated preschool teachers. Table 1 identifies the needs, problems, and challenges experienced by early childhood teachers.

Table 1. Needs and Problems Experienced by Early Childhood Teachers

Needs	Problems
<ul style="list-style-type: none"> • Training on the areas of pedagogy & content of ECE • Training on handling special education • Increasing the number of qualified teachers • ICT Literacy for Teachers • Sustainability of ECE programs • Increase funds to support ECE • School and program recognition • Access to resources • Infrastructure Development 	<ul style="list-style-type: none"> • Lack of qualified teachers • Lack of locally developed instructional materials • Low literacy rate among families that affects the literacy level of students • Limited instructional materials to implement an ideal ECE program • Low morale of ECE Teachers • Language barriers • Lack of qualified teachers in ECE • The school is too far from the homes • Limited financial support • Low enrolment

As mentioned by the ECE teachers of the center, most Early childhood teachers in the Lao PDR are also facing difficulty communicating with parents and children due to the language barrier. Young preschool children in the Lao PDR come from ethnic minority groups with distinct languages and traditions, and just 22% of early childhood teachers speak Lao as their first language. As a result, it may be difficult for ECE teachers to foster productive relationships with the learners and their families and to implement inclusive education.

Early childhood educators in the Lao PDR also face several challenges, such as limited access to training and support, scarce materials, low pay and status, linguistic and cultural difficulties, and a diverse student body. To overcome these challenges, it will be necessary to implement a Professional Development program to promote high-quality ECE that includes government laws, partnerships with international organizations, and the active participation of teachers, parents, and communities.

Through the SLVTC, researchers have looked closely at Laos' educational system and uncovered numerous major difficulties that affect the quality of education that children get. Limited financial support in school facilities, including classrooms, libraries, and computer labs, is a major problem. Because of

inadequate funding and wrong priorities, many schools lack these vital amenities, thus affecting the quality of education they can provide.

The widespread absence of trained educators is another pressing issue throughout Laos's educational system. There is a lack of competent and qualified teachers in the country because of issues such as low earnings, unfair employment, and uncomfortable working circumstances. The quality of education provided suffers because of the imbalanced distribution of students per classroom, low teacher-student ratios, and insufficient time spent on each student.

The lack of textbooks, classroom tools, and toys for play-based teaching methods is another major issue plaguing schools. Due to a lack of funding and materials, schools in Laos can only provide their students with a steady or traditional education, compounding the problems that are already present in this sector. Teachers are hampered in their abilities to educate their students effectively due to a lack of resources and access to advanced and innovative teaching methods.

To overcome these obstacles, the Lao PDR government should place a high value on education and devote sufficient resources to building better infrastructure, increasing teacher salaries, enhancing working conditions, and equipping schools with the tools they need to give children a quality education. In addition, the government should put money into training programs to increase the number of trained educators who can give Laotian children a good education.

The researchers also emphasized the various problems that lead to the low percentage of student enrollment in Lao PDR. Despite government efforts to provide educational assistance, many citizens of the country still choose not to attend school for various important and personal reasons, including financial constraints and the necessity to support and sustain the basic needs of their families. Low enrolment rates are also a result of a general lack of understanding of why education is needed to achieve sustainable development in the country. These problems restrict further access to education and have long-term effects in the development of the country.

The poor quality of instruction offered in many institutions is also noted as a major problem in education in Laos. As clearly inferred during the reflective dialogue, there aren't many excellent and competitive institutions in the nation that address their needs and demands for development; therefore, the underprivileged and depressed communities are left with tech-voc schools and colleges that don't get much funding or support to improve the standard of education they provide. The poor level of instruction in many institutions in Laos

is a result of a lack of funding, insufficient facilities, and inadequate support for professional development for teachers. Students, as a result, are hampered academically and have fewer options in the future to improve personally and professionally.

Additionally, classrooms and language barriers are stated as major problems. Although Lao is the official language of the nation, children are brought up speaking a foreign tongue, like *Hmong* or *Khmu*. This linguistic barrier prevents pupils from making academic progress and restricts their access to more educational opportunities. This problem highlights the demand for increased funding and assistance for teacher education and the creation of language-learning programs that meet the varied linguistic requirements of Lao pupils.

Furthermore, there is a consensus from the SLVTC that the Lao government must prioritize or at least provide substantial support in education to respond to these problems, devote enough resources to raising educational standards, supporting less privileged schools and colleges, and creating language-learning programs to meet the country's students' varied linguistic needs. To encourage increased enrollment rates and advance sustainable development in the nation, efforts should also be undertaken to raise public awareness of the importance of education, particularly among marginalized groups. Preschool centers and schools also experienced several challenges. Table 2 shows the summary of the challenges experienced by Lao preschool schools.

Table 2. Challenges Experienced by Early Childhood Teachers

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- Professional development of ECE Teachers
 - Increasing the basic literacy level among learners
 - Development of local and teacher-made instructional materials
 - Providing training and seminars to improve the pedagogical skills of teachers
 - Development of locally made instructional materials
 - Recruiting good teachers for ECE
 - Inadequate Funding
 - Rural-urban divide
 - Gender inequality
-

Lack of enough funding for Lao schools is one of the most urgent problems. Schools in Laos frequently lack adequate and appropriate funding because of the low priority given to expanding the education sector, leading to a severe lack of

opportunities and constrained economic development in the nation. Most schools are impacted by the lack of funding, which leaves a huge gap between the needs of the education sector and the resources at hand.

The gap between rural and urban areas is a serious challenge for Lao education. Due to a lack of resources and qualified staff, schools in rural areas frequently struggle to offer high-quality education. Rural kids have less access to high-quality education due to the disparity in privileges and opportunities between urban and rural communities, which has a substantial impact on educational attainment. The economic and social disparities between rural and urban populations are made worse by the absence of access to high-quality education.

Education in Laos is also significantly affected by gender stereotypes. Lao women have significant barriers to education because of social and cultural norms, which contribute to the country's existing gender gap. Many females are expected to help at home instead of attending school, which restricts their prospects for progress on both a personal and professional level. Since most of the prospective ECE teachers are females, many young women cannot enroll in ECE courses.

Physical infrastructure is one of the challenges mentioned by the research participants. Some of the classrooms are not equipped with the desired instructional materials and equipment required for ideal ECE classrooms. They need books, computers, toys, playground equipment, and computers. The layout and design of the classrooms need to be revisited too.

2. What micro-credentials can be offered for the professional development of early childhood education teachers?

The participants from SLVC believe that offering microcredentials could help in the professional and personal development of ECE teachers in Lao PDR. Some of the comments given are:

- *Microcredentials are good for ECE teachers who are married and who are living in provinces. They no longer need to leave their families for their studies.*
- *Through microcredentials we could focus on the specific needs of teachers*
- *Microcredentials are cheaper*
- *Through microcredentials, the school, and the teachers could select specific topic that teachers need*
- *Microcredentials could be stackable and after earning some credentials, the teachers can earn units leading to a bachelors or master's degree*

- *Microcredential is something new in Lao, but we believe it is worth implementing*
- *Microcredential could be offered to preservice teachers and para-teachers thus it could address the need for additional trained ECE teachers in the country.*

The statements from the participants show that the administrators and ECE teachers are optimistic that microcredentials could help in the development of early childhood education educators in Lao PDR to build a sustainable workforce and bridge the massive gap in the field of early childhood education. Table 3 identifies the summary of possible microcredentials that could be offered in Laos PDR based on the expressed needs of SLVC teachers and administrators.

Table 3. Microcredentials that could be offered to ECE Teachers in Lao PDR

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- Developing Indigenous Instructional Materials for Young Children
 - Developing Literacy Among Young Children
 - Teaching Beginning Reading
 - Teaching Mathematics to Young Children
 - Teaching Values and Good Manners among Young Children
 - Teaching Young Children How to Write
 - Teaching Arts and Crafts for Young Children
 - Teaching Music and Movements to Young Children
 - Organizing Learning Environment for ECE
 - Professional Ethics for ECE Teachers
 - Classroom Management Skills
 - Developmentally Appropriate Practices for Young Children
 - Basic Computer Skills for Teachers
 - Using ICT Tools for Teachers
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The research participants believe that there is a need to strengthen the level of technological, pedagogical, and content knowledge (TPCK) of the preservice and in-service teachers in ECE. Technological knowledge allows teachers to use ICT effectively in teaching. Pedagogical knowledge enables teachers to improve their understanding of how children learn and how to teach

them effectively. Content knowledge is the capacity of teachers to understand and master the subject or topics they are teaching. Hence the list of microcredentials in Table 3 is enough to develop a strong foundation for teaching ECE in Lao PDR.

The unique needs and nature of young children necessitate the design and development of a learning environment that will engage them more meaningfully in all the learning activities designed for them. It also requires an understanding of new classroom management techniques to handle the unique learning styles and behaviors of the learners. Therefore, these microcredentials are imperative to earn the essential competencies and skills in addressing the foundational needs of teachers in early childhood education.

The ECE teachers need microcredentials that will allow them to develop local materials, contextualize the curriculum, and create assessment tools that are culturally appropriate for the learners. ECE teachers need to learn how to design and implement learning activities that are engaging and developmentally appropriate for children.

Since most of the students who will enroll in these microcredentials are coming from poor family backgrounds, the administrators and teachers of SLVC identified the following concern:

- *There should be a general orientation to possible students before offering microcredentials so that they will understand what is microcredential and how it is implemented*
- *The tuition must be affordable*
- *The modules must be translated in Lao language or at least they are written in an easy-to-understand English*
- *Not all teachers have access to technology and internet hence, this should be considered*
- *The microcredentials should be implemented in flexible learning*

These micro-credentials are being made available in the Lao People's Democratic Republic with the goal of boosting the standard of the country's pre-K programs. Teachers can better educate students if they have access to resources that help them develop specific skills and knowledge. The absence of qualified teachers and insufficient funding are only two of the issues that these micro-credentials can help Laotian institutions alleviate. Lastly, these micro-credentials can assist early childhood educators in Laos in progressing their vocations and serving their students.

4. Conclusion

The professional development of early childhood education teachers is essential in the implementation attainment of the goals of Universal Kindergarten. In this study, the use of microcredential is explored in providing lifelong learning opportunities, professional development, and in providing the needed competencies for ECE teachers. ECE in Laos experience numerous problems and challenges. More than the needed physical improvement is the recruitment and professional development of the teaching force. The teachers are the most precious asset of the schools. There is no excellent curriculum without having excellent teachers.

The dynamic nature of microcredentials enables the pre-service and in-service teachers to develop their PCK level and equip them for meeting the 21st-century challenges of teaching and learning. Microcredentials could provide those who have no opportunities, limited resources, and a lack of support to have access to quality education. Though the provision of quality education in Laos is hampered by several needs, issues, and problems that schools encounter. The government, civil society, and international partners of Laos must work together to solve these problems so that all children in the country may receive a good education. Finally, the researchers and the participants of this study are optimistic that microcredentials will contribute to the development of all teachers and it could replace the irrelevant training and seminars that are currently implemented in the country.

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