

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/362688998>

Cambodian Journal of Educational Research (Volume 2, Issue 1)

Book · August 2022

CITATIONS

0

READS

4,917

2 authors:



[Kimkong Heng](#)

Paññāsāstra University of Cambodia

182 PUBLICATIONS 1,955 CITATIONS

[SEE PROFILE](#)



[Koemhong Sol](#)

Paññāsāstra University of Cambodia

43 PUBLICATIONS 608 CITATIONS

[SEE PROFILE](#)

CAMBODIAN
EDUCATION
FORUM

A forum for education

CAMBODIAN JOURNAL OF EDUCATIONAL RESEARCH

Volume 2 | Number 1
July 2022

Editors-in-Chief

Kimkong Heng
Koemhong Sol

CAMBODIAN
EDUCATION
FORUM

A forum for education

CAMBODIAN JOURNAL OF EDUCATIONAL RESEARCH

Volume 2 | Number 1
July 2022

Editors-in-Chief

Kimkong Heng
Koemhong Sol



Published by Cambodian Education Forum

Copyright © 2022 Cambodian Education Forum

All rights reserved. No part of this work may be reproduced, reprinted, distributed, or utilized in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, without the prior written permission of the Cambodian Education Forum.

Disclaimer

The printing of this publication is supported by the Australian Department of Foreign Affairs and Trade through The Asia Foundation's Ponlok Chomnes: Data and Dialogue for Development in Cambodia program. The views expressed in this publication are the authors' alone and are not necessarily the views of the Australian Government or The Asia Foundation.

Cover design: Ponlok Chomnes/The Asia Foundation

Cambodian Education Forum (CEF)

Email: cef.correspondence@gmail.com

Website: www.cefcambodia.com

Facebook: www.facebook.com/CEF.Cambodia

Twitter: www.twitter.com/CEFCambodia

Telegram: t.me/cefcambodia

Acknowledgments

On behalf of the team at the Cambodian Education Forum (CEF), we would like to express our sincere thanks to the CEF editorial board for their contributions in various capacities, particularly in helping to review manuscripts submitted for publication consideration with the Cambodian Journal of Educational Research (CJER). We would also like to thank all contributing authors who have worked hard to respond to our comments and requests to make their manuscripts qualified for publication.

As always, we are grateful to our scholarship providers, including the Australia Awards, the Swiss Government Excellence Scholarships, the HKU Postgraduate Scholarship, and the Japanese Government (MEXT) Scholarship, for their generous support which has provided us with the opportunity to pursue our academic journey and contribute to the development of a research and publication culture in Cambodia.

Our sincere gratitude goes to the Australian Department of Foreign Affairs and Trade (DFAT) through The Asia Foundation's Ponlok Chomnes: Data and Dialogue for Development in Cambodia program for the financial support in making this issue and the previous issue of CJER (Volume 1, Number 2) available in print. Now the print version of these two issues of CJER is available in the libraries of almost 30 universities, higher education institutions, and think tanks across Cambodia.

Finally, we are grateful to our families, relatives, and friends for their love, support, and encouragement. They have helped us keep going despite the many challenges we have faced in making the publication of this journal possible.

Kimkong Heng and Koemhong Sol
Editors-in-Chief
Cambodian Journal of Educational Research

This page intentionally left blank

Table of Contents

Acknowledgments.....	iii
----------------------	-----

EDITORIAL

The Cambodian Education Forum at two years old: Keeping the momentum going	1
<i>Koemhong Sol and Kimkong Heng</i>	

FULL-LENGTH ARTICLES

A path towards “international standards” for the Cambodian academic system?	8
<i>Murat Yildizoglu</i>	

Cambodia’s gender policy: An analysis of women and girls’ education strategies under the Neary Rattanak IV Strategic Plan (2014-2018).....	37
<i>Molika Heng</i>	

Challenges of English language learning and teaching in Cambodia: A case study of Kith Meng Brasat High School	62
<i>Sereyrath Em</i>	

Making learning styles and destinations visible: Using dashboards to support secondary education.....	81
<i>Nathan Polley and Russell Mills</i>	

Enhancing students’ motivation in foreign language learning	104
<i>Panharith Nat</i>	

Promoting teachers' continuous professional development in Cambodian higher education: Issues and recommendations.....	119
<i>Bunhorn Doeur</i>	

SHORT ARTICLES

English proficiency: Key to educational opportunities for Cambodian students.....	135
<i>Kimcheng Ngel</i>	

Digital transformation in higher education: Key to enhancing Cambodia's higher education sector.....	146
<i>Kimkong Heng and Bunhorn Doeur</i>	

Motivating Cambodian high school students to pursue higher education in science and health science majors: Issues and suggestions.....	157
<i>Virak Sorn and Monirath Suon</i>	

ABOUT CAMBODIAN JOURNAL OF EDUCATIONAL RESEARCH

Editorial board	167
Submission guidelines	174
Call for articles	176

ABOUT CAMBODIAN EDUCATION FORUM

Background.....	177
Aims.....	177
Philosophy	178

The Cambodian Education Forum at two years old: Keeping the momentum going

Koemhong Sol

*International Christian University
Tokyo, Japan*

Kimkong Heng

*Cambodian Education Forum
Phnom Penh, Cambodia*

Welcome to the second volume of the *Cambodian Journal of Educational Research* (CJER). In this editorial, we look back at the historical development and achievements of the Cambodian Education Forum (CEF), which turned two years old in July 2022. We then provide brief information on CEF's new initiative, called "CEF Research Seminar Series." This editorial ends with an overview of articles in this issue: Volume 2, Issue 1.

History and achievements

The Cambodian Education Forum is now two years old. Co-founded in July 2020 by a team of emerging Cambodian scholars, CEF aspires to contribute to promoting research and publication culture in Cambodia. With this aspiration, CEF offers a platform for Cambodian academics, researchers, students, and beyond to publish their scholarly work concerning Cambodian education and other educational issues through a rigorous peer review and publication process (CEF, 2021).

With an ambitious and inclusive vision, CEF aims to:

- Provide a publication platform for Cambodian researchers, educators, and students
- Share knowledge, research findings, and informed opinions about education in Cambodia

- Support Cambodian novice writers to publish through quality peer review, mentorship, and editorial processes
- Publish essays, opinion pieces, and research articles about education in Cambodia and beyond
- Offer insights from education experts through interviews, discussion, and publication
- Share education-related resources to students, teachers, academics, and researchers
- Promote Cambodia's image in the regional and international arena (CEF, 2021, para. 4)

The work of CEF has been made possible by a dynamic editorial team with diverse educational and professional backgrounds. Since its establishment in July 2020, the CEF editorial team has expanded significantly. As of July 2022, the CEF editorial team comprises 62 members, including two editors-in-chief, one managing editor, four editors, nine associate editors, seven guest editors, 25 registered reviewers, seven anonymous reviewers, and seven junior reviewers.

CEF has, to date, published 63 articles, four edited books, and two issues of CJER, CEF's earnest initiative launched in September 2021 to promote a research and publication culture in Cambodia. The launching of Cambodian-based academic journals in recent years like CJER has been noted as "an important milestone for research development in Cambodia" (Heng & Sol, 2021, p. 11).

More than just a typical publication platform, CEF has provided training and mentorship on academic writing to Cambodian novice and aspiring writers, particularly university students and recent graduates, through its regular six-month-long internship program (Heng, 2021). The primary purpose of this internship program is to help the internship participants improve their academic writing skills and enable them to publish, in most cases, their first short or medium-length research articles and/or book chapters in English (Heng, 2021). Thus far, CEF has offered three cohorts of its internship program. The first and second cohorts were completed, with 30 interns participating in the program. Most of them were able to write and publish their articles and book chapters with CEF. Few were exceptional and went beyond CEF to

publish their pieces with local and international outlets. The third cohort comprising 20 interns is well underway, and they are working with the CEF team toward improving and finalizing their book chapters for an upcoming edited book planned to be published by CEF in late 2022.

Recently, CEF has called for donations to support its operation and website maintenance. Thanks to those who support our vision and activities to promote the research and publication culture in Cambodia, we have received generous donations from almost 50 people as of July 2022. We have also received financial support for printing this issue and the previous issue (Volume 1, Number 2) of CJER from the Asia Foundation's Ponlok Chomnes: Data and Dialogue for Development in Cambodia program. With these contributions and support from our like-minded supporters and our enthusiastic editorial board members, CEF is now in a better position to continue to make impacts on Cambodia's research and publication landscape for years to come.

Overall, within these two years, CEF has diligently worked to realize its vision and made some significant achievements, as mentioned earlier. However, these achievements of which we are all at CEF proud have not been attained without challenges. As concluded in our first edited book, entitled *"English language teaching, education, and online learning in Cambodia during COVID-19: Perspectives from practitioners and researchers,"* our work has been limited by time constraints and enormous administrative and editorial workloads (Heng et al., 2020). However, the CEF team remains committed to making a positive impact on the research and publication culture in Cambodia.

New initiatives

CEF continues to take up more challenges to foster a conducive environment for stimulating research and publication interest in Cambodia. It has recently launched another initiative, termed "CEF Research Seminar Series." This initiative aims to provide an open platform for Cambodian academics, researchers, university students, and recent graduates to share their research findings or present their research work. Simultaneously, interested individuals can attend this Research Seminar Series, interact with presenters, learn about how research is conducted, and gain knowledge about specific academic areas.

The first CEF Research Seminar Series was successfully held online on July 16, 2022. The CEF team was content with the eager involvement of our participants, especially during the Q&A session. We hope to run this Research Seminar Series at least once or twice a month. Therefore, we encourage interested individuals to take this opportunity to disseminate their research work or findings and help this Research Seminar Series make a positive impact on the research landscape in Cambodia.

Keeping the momentum going

CEF will carry on its existing initiatives, including CJER, internship program, and the newly-launched Research Seminar Series, to keep the momentum going. As an academic journal, CJER will continue to publish original manuscripts in the field of education, particularly those concerning the Cambodian context. We endeavor to ensure that any accepted manuscripts are of high quality; we will therefore maintain the rigor of our peer review and publication process. At the moment, CJER publishes two issues annually and accepts three types of articles, specifically full-length articles (no longer than 7000 words), short articles (no longer than 3500 words), and book reviews (no longer than 1500 words). Interested contributors can make their submissions to CJER throughout the year. Submission guidelines for CJER are available on the CEF website and at the end of this issue.

CEF will also continue to offer its internship program to novice writers, especially university students and recent graduates, to learn the necessary academic writing skills in English and publish their academic articles or book chapters with CEF and beyond. This unique opportunity provides our interns with practical learning experiences while working to produce their writing products.

As CEF's new initiative, the Research Seminar Series will now be one of our main activities. We hope this initiative will serve as a sharing and learning platform for those interested in research and be able to instill a culture of conducting and publishing research among Cambodian researchers, academics, teachers, and students. Meanwhile, we encourage our participants to exchange ideas and have an open dialog with our presenters. We believe that

this Research Seminar Series, together with other activities of CEF, will contribute to building a better research ecosystem in Cambodia.

Overview of the issue

This issue of CJER contains nine articles, three of which are short articles that have recently been published by CEF and are freely available for reading or download on its website. There are six new full-length articles in this issue. As noted in the previous editorial (Heng, 2021), articles published between January and June of the year will be included in the first issue of the volume in that year, provided that they are qualified for inclusion.

The nine articles included in this issue examine various educational issues affecting Cambodia. The first full-length article by Murat Yildizoglu explores issues concerning international standards for Cambodia's academic system. The article discusses the rationale for and key elements of international standards. It elaborates on the challenges facing Cambodian higher education and provides some suggestions to build the academic system in Cambodia toward international standards. The second article by Molika Heng analyzes Cambodia's gender policy, focusing on women and girls' education strategies in the Neary Rattanak IV Strategic Plan introduced by the Cambodian Ministry of Women's Affairs. It was found that the policy implementation was successful; however, some challenges required further actions and efforts from policymakers.

Another article by Sereyrath Em examines the challenges of English language learning and teaching in Cambodia. Based on a survey and in-depth interviews, the study showed that various factors such as the quality of teachers, study materials, and class size, among others, were the key factors contributing to the challenges in teaching and learning English in a Cambodian secondary school. The next article by Nathan Polley and Russell Mills also focuses on secondary education. It examines the use of dashboards to support learning and teaching in two international secondary schools in Cambodia. The study revealed that dashboards were useful in facilitating teaching, learning, and career counselling.

Two other full-length articles focus on motivation in language learning and continuous professional development (CPD) for teachers, respectively. The article by Panharith Nat looks at how to enhance students' motivation in learning a foreign language. It provides some suggestions on how to motivate students in online learning. Bunhorn Doeur's article discusses issues concerning teachers' CPD. It offers a set of recommendations to improve CPD opportunities for Cambodian university teachers.

The last three articles are short articles that CEF published between April and June 2022. The first article in this category, written by Kimcheng Ngel, explores the significant roles of English and argues that good English proficiency can unlock many educational opportunities for Cambodian students. Another article by Kimkong Heng and Bunhorn Doeur examines the phenomenon of digital transformation in Cambodian higher education. It argues that higher education digital transformation is key to enhancing Cambodia's higher education sector. The final article in this issue is co-authored by Virak Sorn and Monirath Suon. It looks at how to motivate Cambodian high school students to pursue science and health science majors in higher education. The article offers some suggestions to achieve this aim.

Acknowledgments

The authors would like to thank Dr. Sopheap Kaing, Co-founder and Managing Editor of the Cambodian Education Forum, for his helpful comments on an earlier version of this editorial.

The authors

Koemhong Sol is a Japanese Government (MEXT) scholar pursuing a PhD in Education at International Christian University in Tokyo, Japan. He is a Co-Editor-in-Chief of the Cambodian Education Forum. His research focuses on teacher education and policy, continuous professional development for teachers, school leadership, special education, higher education, and learning and teaching assessment.

Email: koemhongsol.edu@gmail.com

Kimkong Heng is an Australia Awards scholar. He has recently submitted his PhD thesis to the School of Education at the University of Queensland, Australia. He is a Co-founder and Editor-in-Chief of the Cambodian Education Forum. He is also a Visiting Senior Research Fellow at the Cambodia Development Center and a PhD Fellow at the Cambodia Development Resource Institute. He has published extensively on Cambodia's social, political, and educational issues. His research interests include TESOL, research engagement, academic publishing, and higher education.
Email: kimkongheng@gmail.com

References

- CEF. (2021, November 30). *About CEF*. <https://cefcambodia.com/about/>
- Heng, K. (2021). The Cambodian Education Forum's contribution to building a research culture in Cambodia. *Cambodian Journal of Educational Research*, 1(2), 1-5. <https://cefcambodia.com/2021/12/30/the-cambodian-education-forumcontribution-to-building-a-researchculture-in-cambodia/>
- Heng, K., & Sol, K. (2021). Academic research in Cambodia: Progress, challenges, and ways forward. *Cambodian Journal of Educational Research*, 1(2), 6-23. <https://cefcambodia.com/2021/12/30/academic-research-in-cambodia-progress-challenges-and-ways-forward>
- Heng, K., Sol, K., Kaing, S., & Ros, V. (2020). Conclusion: Key challenges in working with novice Cambodian writers and researchers. In K. Heng, S. Kaing, V. Ros, & K. Sol (Eds.), *English language teaching, education, and online learning in Cambodia during COVID-19: Perspectives from practitioners and researchers* (pp. 125-131). Cambodian Education Forum. <https://cefcambodia.com/books/>

A path towards “international standards” for the Cambodian academic system?

Murat Yildizoglu¹

*Ministry of Education, Youth and Sport
Phnom Penh, Cambodia*

Abstract

“International standards in higher education and research” cover, in fact, a set of “tools” developed in different countries and in different times aiming to answer the demands of modern societies from their education system. This article starts with a discussion of the rationale behind these international standards and the organizational tools that can facilitate their implementation. Our observations on the Cambodian higher education system seem to point to the necessity to develop new implementation tools answering the “how” question even if many institutional tools are included in the large arsenal of decrees and sub-decrees already adopted. The second part of the article starts with these observations, considers how they can give rise to some fragilities in the Cambodian higher education system, and proposes some practical measures that aim to alleviate them.

Keywords: International academic standards; higher education governance; education policy; research policy; economic development

¹ The author is also affiliated with Expertise France, Paris, France.

ARTICLE HISTORY

Received 3 March 2022

Accepted 16 June 2022

Introduction

What we call today “international standards in higher education and research” cover a set of “tools” developed in different countries and in different times aiming to answer the demands of modern societies from their education system. We observed during the last century a convergence between academic systems among this diversified set of solutions and the emergence of a set of primary characteristics shared between successful educational systems over the world. We call “international standards” in higher education and research this shared set of features that we will present in the third section of this article. Many countries that have adopted these characteristics have been able to benefit fully, since the Industrial Revolution (Mokyr, 2005; Nelson, 1996), from the *virtuous cycle* that operates through the positive feedback channels between the main *engines* of economic development that are knowledge, education, science, and technology (Aghion & Howitt, 1998).

The universities that have implemented these standards with success have attracted talents from other countries in the world. They are sometimes called “world-class universities” (Aithal & Aithal, 2019; Ros & Sol, 2021; Salmi, 2009). Given the imprecision of this concept, we will focus more directly on the precise characteristics that aim to solve specific organizational problems in higher education and research.

It is important to observe that these standards are perfectly compatible with strategies recently developed by Cambodia in science and technology (ESCAP, 2021; MISTI, 2021). We cannot detail them in this article, but a set of consecutive education plans have resulted from the Rectangular Strategies:

Selected recent and current key medium-to-long-term plans and policies include: Education Strategic Plan 2001-05 Education Strategic Plan 2006-10 Education Strategic Plan Update 2009-13 Education Strategic Plan 2014–18 Policy on Higher Education Vision 2030 Higher Education Reform Action Plan 2015-18 Cambodian Higher Education Roadmap 2030 and Beyond Policy on Higher Education Governance and Finance for Cambodia Higher Education Action Plan 2018-22. (Mak et al., 2019a)

These plans and accompanying decrees and sub-decrees have established a full arsenal of institutions and measures perfectly in-line with international

standards (Mak et al., 2019a; Sok & Un, 2018a). This arsenal establishes answers to the “*what*” question, but many studies underline that their application has been somewhat problematic, and the “*how*” question seems to continue to be much more relevant.

In this article, we will successively explore potential answers to the why, what, and how questions concerning international standards. In the next section, we will first examine the rationale behind these international standards: Why have they emerged and become essential regulation mechanisms in modern societies? Adopting a systemic view of the higher education system will help understand these issues and better identify the aims of each global dimension of these international academic standards. In the third section, we will describe and discuss the different components of these standards and the organizational *tools* aiming to implement them. The rest of the article will focus on the Cambodian higher education system. The fourth section will summarize some important characteristics of this system and underline some fragilities that may result from them. The fifth section will propose some potential answers to the *how* question and aims to shed light on some tools that may help the catching-up of the system with international standards. The last section will conclude the article.

The rationale for international standards

These standards have been developed to answer many issues that have been progressively emerging since education started to play the central role in modern societies, in the development of the first Industrial Revolution and later. The parts that the universities are expected to play have become multi-dimensional as the level of technological, economic, and social complexity has risen in industrial societies.

The increasing fragmentation of the international supply chains, accompanied by the complexification of the international division of labor, the growing specialization in the service sectors, allowed by the development of information systems and data-based marketing and provision, put increasing pressure on the higher education system both in terms of developing very specialized competencies in all sectors, and giving the students a comprehensive ability to understand the structure of the system/society in which they live as citizens.

Moreover, the tensions put upon social coherence of these societies by increasing levels of inequality give a central role to education at all levels, but especially to higher education (where inequalities may become considerably amplified) in preserving this coherence.

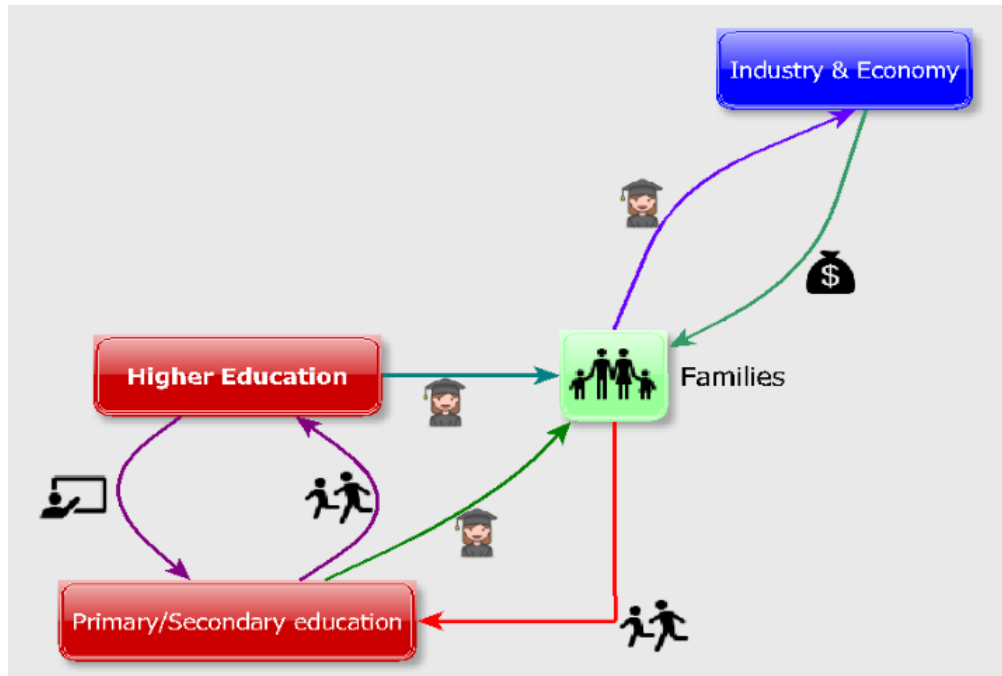


Figure 1. Education as a private good?

This central role is not necessarily visible to families deciding about their children's education or even to governments of countries where industry and technology have not yet become significantly central to economic growth and development. In these contexts, education in general and higher education are seen as a private good: a means for parents to ensure higher future income for their children and, often, for themselves when they become old (see Figure 1). In this frame, education is seen as *a private good* for families, resulting from a trade-off between immediately sending their children to work, condemning the family to a low-income flow, and *investing* in their education, accepting to wait, and possibly attaining a higher future income flow (Altbach, 2007). For a family stuck in a Malthusian regime where the immediate day-to-day survival is at stake, unfortunately, there is no actual trade-off, and education is not a possible choice. Even for other families, higher education is seen as having only an incremental advantage, allowing their children to ensure a higher income from the economy than lower education levels. This private good vision of education has become more dominant globally since the 80s, but it is only a partial and incomplete apprehension of education's role in society.

Education indeed plays a much richer and central role in modern industrial societies. Technological innovations, higher education, and academic research are at the center of a complex nexus of interactions and positive *externalities*, as economists call it (see Figure 2).

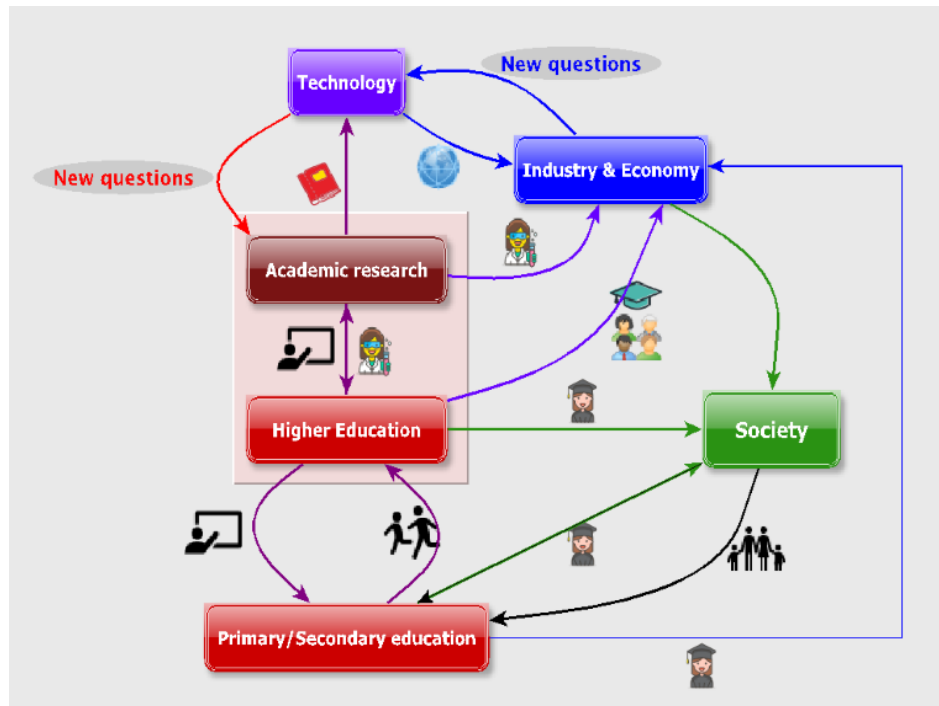


Figure 2. The central role of higher education and research in economic and social development

Higher education allows families to reach higher income levels indeed. Still, it also allows the emergence of scientific research in universities and companies by providing them with competent scientists and engineers. This research is necessary for companies aiming to absorb technologies developed elsewhere and create new technologies internally through research and development (R&D) activities. The technological needs of the industry and their R&D activities benefit from scientific knowledge developed in universities, for which these R&D activities are also a source of new scientific questions opening new research paths. In countries that are not on the world's technological frontier, these internal research abilities play an essential role in absorbing new technologies and catching up with that frontier (UNESCO, 2016).

Besides the economic growth that increases the general welfare in society and also allows the extension and intensification of education levels of the

population, education brings positive effects in other areas of social life: better citizens directly contribute to the development of more open societies, which play, in its turn, a clear positive role in economic development on the long term; better health care levels; better care of inactive populations (children and elderly); the lower number of conflicts; less violence; a fairer society and economic relations; better labor participation, and consequently higher productivities. Hence, these positive externalities constitute an even broader virtuous cycle steering economic and social development (Bray, 2002).

Consequently, modern societies demand a lot from higher education and research (Altbach, 2007):

- Train competent citizens with a sufficient general education level;
- Train specialists with cutting-edge skills for technological, economic, and social development;
- Build a sufficient research capacity to ensure technological and scientific autonomy at the national level;
- Train future educators for all educational institutions.

Answering all these emerging demands induced industrial countries to develop different education systems over time, and we have seen the emergence of various answers to these demands even in the same country.

Over the last century, as an effect of the second globalization, we have observed a convergence between these diverse solutions and the emergence of some shared organizational principles and frameworks adopted as an efficient way for universities and higher education and research to fulfill their missions in modern societies. We will designate these shared principles by “international standards” and describe them in the next section.

These standards emerged and diffused because they have been successful in ensuring:

- *Legitimacy* and efficiency of decision-making processes at all levels;
- *Adherence* of all members of the institution to its objectives;
- Full engagement of faculty in *training* students (knowledge diffusion);
- Full engagement of faculty in academic *research* (knowledge creation);
- Ability to attract *new talents* and to allow their emergence in the institution, at all levels, and in all academic functions;

- Good connection with local and national needs and development strategies.

These standards share indeed a set of global characteristics that allow them to fulfill these aims:

- A transparent, participative, and efficient *governance* system that ensures *legitimacy*;
- A transparent and fair *hiring* system that can *attract talents*;
- A transparent, fair, and progressive academic *career path* system that ensures the aligning of individual incentives with the objectives of the institution and hence ensures operational *efficiency*;
- *Facilities* for students, teachers, and research that are necessary for attracting talents again and for the quality of education and research;
- A performant *university-industry-society network* that ensures efficient connection with *global/national goals* and needs and enables the higher education and research system to participate in economic and social development fully.

Consequently, we have a relatively clear idea about which characteristics are necessary for higher education and research to be able to play its expected central role in society. Of course, one crucial question remains: Through which mechanisms may these characteristics be implemented? Answering the question “what?” is not enough; we also need to answer the question “how?”. Consequently, the following section will be dedicated to practical “tools” put into action in this implementation.

Components of international standards

We will present in this section the mechanisms through which the preceding principles can be implemented in a higher education system.

Principles of good governance and internal legitimacy

Following the previous general discussion, the governance structures in higher education and research need to ensure the internal legitimacy of decision processes and strategy choices because the legitimacy would enforce the adherence of the members of the institution to these decisions and strategies,

hence increasing the operational efficacy and the ability to attain all strategic targets. To this end, current international standards correspond to transparent, participative, and effective governance structures allowing for strategic autonomy through continuous monitoring and periodic self-assessment (Mak et al., 2019a).

Indeed, autonomy is necessary because academic activities have, in general, a marked creative dimension (teaching, research, and administration) and are rarely compatible with a strictly hierarchical organization. However, universities, since their origin, are also quite complex organisms, encompassing many scientific areas and activities. At its foundation in 1200, the University of Paris already comprised 12 disciplines (starting with canonical law, theology, and health sciences) in four *faculties* and became fully independent from religious and political authorities in 1231, after a two-year strike by the faculty. Today, a typical mid-sized French university comprises 20-30 departments, several engineering schools, several vocational schools at a bachelor's level, many research laboratories, and a mesh of administrative levels and functional divisions (www.u-bordeaux.fr).

Governance structures of universities consequently needed to be able to efficiently deal with complexity while fostering creativity by ensuring the following characteristics through the implementation of corresponding organizational *tools* that have been invented to this end:

- **Autonomy and flexibility:** By *decentralization/delegation* of information collection and decision-making through a multi-level organization.
- **Legitimacy:** By ensuring *representativeness* in decision-making bodies/councils at all levels, generally through a transparent election process.
- **Accountability:** By creating a *functional set of collective assessment routines and indicators* at all levels, periodically monitored by an independent internal audit bureau.
- **Coordination:** By ensuring *open and continuous communication* between all fields and organizational levels, as well as during the periodical meetings of different relevant councils.

- Efficiency: Making *decisions at the most appropriate operational level*. Top governance team being in charge of the most global and strategic decisions/arbitrations, delegating day-to-day governance to lower levels.

This governance model allowed universities to obtain full strategic autonomy in all major areas progressively:

- Recruitment of students;
- Conception and evolution of teaching programs at bachelor's and master's degree levels;
- Organization of research activities and facilities;
- Development of professional network;
- Development of an international academic network;
- Management of existing financial resources and activities to attract supplementary resources;
- Recruitment of faculty at different positions and departments.

We will now consider in detail these organizational tools, starting with the main one that concerns the decentralized organization of the governance structure.

A multi-level governance structure

A multi-level organizational structure is necessary for efficient decentralization and delegation. The main components of such an organization in universities are commonly the following (see Figure 3):

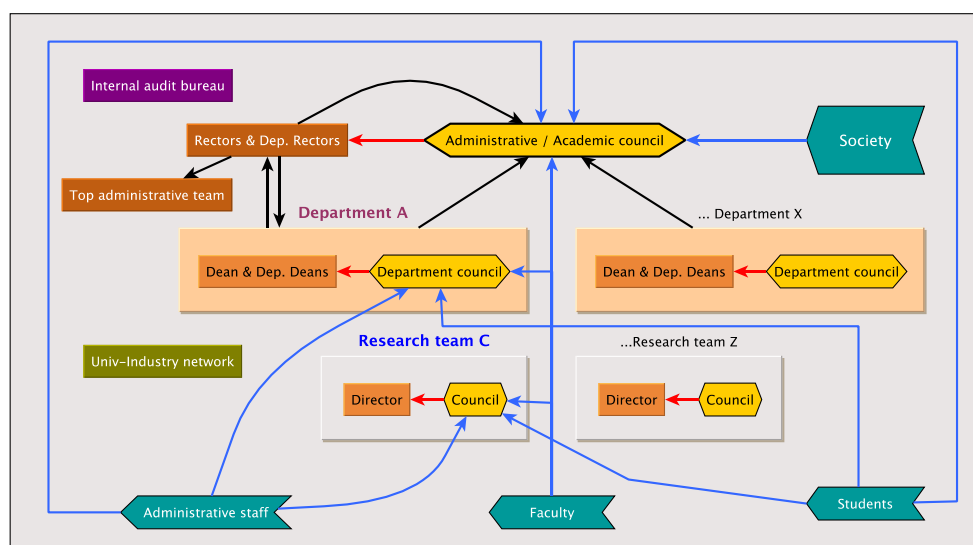


Figure 3. A multi-level and representative governance structure

- The top governance team is composed of the rector and deputy rectors, as well as administrative directors in different major fields of autonomy:
 - ◆ Scientific priorities and strategies;
 - ◆ Coordination and planning of teaching programs at all levels;
 - ◆ Financial coordination and planning;
 - ◆ Coordination and planning of human resources (in the administrative areas and between academic fields);
 - ◆ Coordination and planning of physical resources (buildings, equipment, etc.);
 - ◆ Coordination and development of a national and international network of the university.
- Administrative divisions and departments;
- Department deans;
- Research team directors;
- University councils:
 - ◆ Academic council at the top level, electing the rector and the deputy rectors. As an example, the academic council of the University of Bordeaux is composed of 80 members, divided into two equally sized commissions: the first one in charge of academic research and the second one in charge of academic programs and academic life.
 - ◆ Department councils elect and advise department deans;
 - ◆ Research team councils elect and advise research team directors;

These councils play an essential role in this multi-level structure:

- They elect, advise, and control (accountability) the executive teams at each corresponding level.
- They guide and monitor the activities of that team.
- They are composed of elected faculty members, administrative operators, and students (representativeness). Elected members may be complemented, for a fraction, by designated ones. They should also comprise external members from the society and university partners.

- Executive teams and academic councils are re-elected periodically (typically every five years). Their number of terms is generally limited (two terms at most, for example) to attract new talents and innovative ideas to these exhausting positions.

Steering such a complex organization cannot be done efficiently without a continuous monitoring system through quality assessment procedures.

Quality assessment

Quality assessment (QA) is essential because strategic autonomy requires periodic monitoring for its implementation. Steering the university cannot be done with closed eyes, hence the importance of *continuous internal monitoring* at all levels through *self-assessment*. Also, it cannot be done without a map of the landscape, hence the necessity of a periodic external point of view through *external QA* procedures.

Internal monitoring and QA

Steering the university and implementing the strategy need continuous (yearly at least) assessment and monitoring. Again, the primary governance principles (transparency, decentralization, openness, and efficiency – parsimony) should guide this monitoring process that should proceed using:

- A compact set of indicators at all levels;
- Data collection and assessment processes at each local level (department, laboratory, administrative levels);
- Evaluation process by an independent Internal Audit Bureau.

External quality assessment

A periodic external point of view on the university is also necessary for:

- Avoiding *blind angles* during the steering process and internal QA process;
- Checking the performance of the internal strategy in comparison with the evolution of the national and international academic landscapes (the university may be advancing but lagging in the global academic landscape).

This external assessment is generally done by a national institution (the Accreditation Committee of Cambodia in Cambodia, High Council for Evaluation of Research and Higher Education in France (Yildizoglu, 2020a, 2020b), German Accreditation Council in Germany, or regional ones like ASEAN University Network – Quality Assessment). To be complete and fully useful, they need to cover all strategic domains, including governance, training programs' quality, and research activities. In general, they start from the internal QA report by the university and probe the reality of the situation through an extensive visit to the university by an independent committee composed of members fully competent in the areas covered by the university.

Financial support and autonomy

Strategic autonomy is only a burden in the absence of necessary financial resources. The development and modernization of the higher education system necessitate the mobilization of resources from public and private financing sources.

In industrial countries, the primary sources of financing are public funds, which cover 66% of the costs of universities in France and 80% in Germany, and nearly 100% in northern Europe, for example.

On the other hand, developing countries spend much less of their budget on each student. The faculty wages and quality of life are generally relatively lower than in industrialized countries (Bray, 2002). This can be explained by a severe constraint on available resources in these economies. Their governments may also tend to see education as a private good since the positive externalities may be less visible, or even worse, less *desirable*, in their eyes. Moreover, given the high share of low-income families in these countries, tuition fees cannot constitute a source of financial autonomy, at least not without increasing the already substantial inequality generally observed in these countries. Globally, public funding of universities is suboptimal in many countries, including industrial countries.

We represent in Figure 4 the relationships between potential sources of funds for universities and their main activities. These are financed by international

research programs (e.g., the National Science Foundation programmes in the USA, or the European Framework programmes, of which the most recent one is Horizon 2020, with a budget of 95 billion Euros over seven years) and from the private sector, notably through research collaborations.

Many universities have created foundations for managing these private funds in the most tax-efficient way to maximize their mobilization for academic operations. The quality of academic research (see below) and training programs is essential in establishing the university's reputation and attracting non-recurrent funds.

One issue that continues to be quite controversial in the public financing of universities: Despite many studies that show the necessity and importance of recurrent and stable public funding of all universities and research, budget constraints and political arbitrations have been pushing many countries to adopt project-based temporary financing and “excellence”-based financing of a handful of universities. Such a concentration of financial means aggravates inequalities in accessing quality higher education.

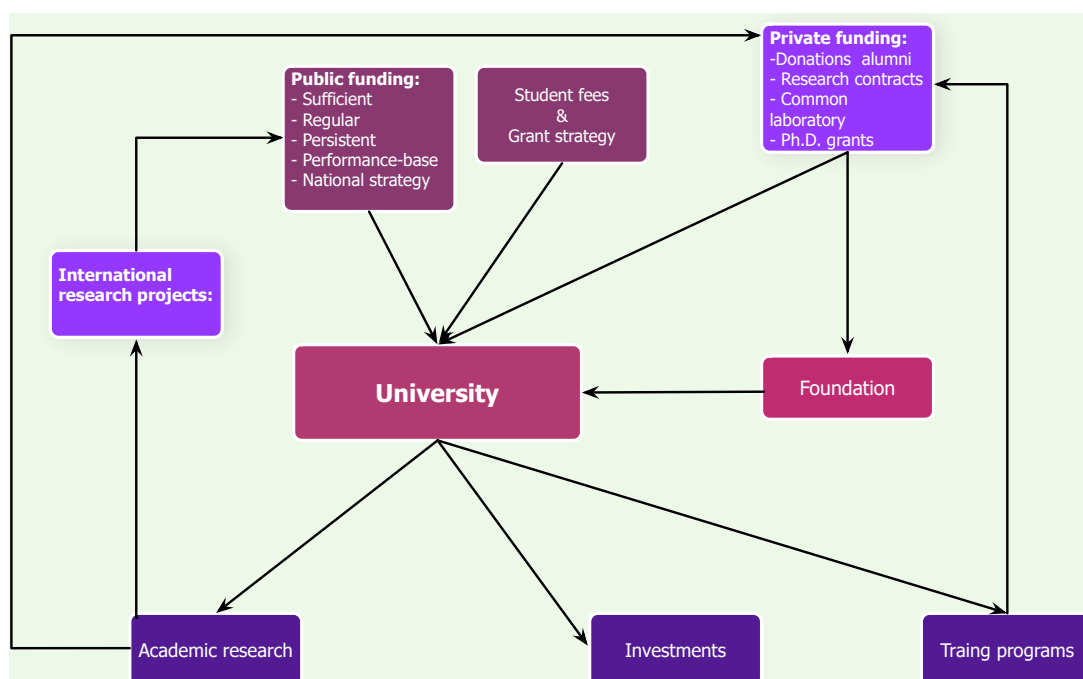


Figure 4. Funding of higher education and research through public and private resources

In any case, financial autonomy in deploying these resources is necessary for the implementation of the strategy, and public budgeting systems in many countries had to evolve in this direction by

- Implementing the possibility of flexible budgeting;
- Decentralizing spending decisions and separating these decision centers from ordering centers (autonomy);
- Allowing multi-year rolling budgets;
- Forcing analytical and functional accounting.

Attracting and developing talents in education and research

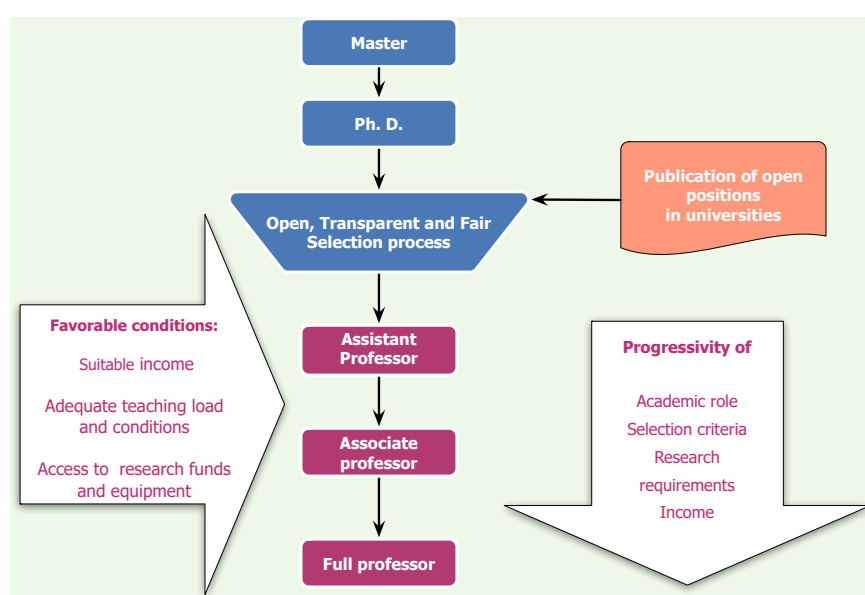


Figure 5. Attracting and curating talents

Attracting the best students to the university and the best graduates towards academic research are critical in the development of each university in the system. Attracting Cambodian academics with a PhD from abroad and giving them very favorable academic and financial conditions for following their research projects in Cambodia are essential in the capacity-building phase and very important in limiting the brain drain (Ahrens & McNamara, 2013). We have discussed above the governance principles necessary for such an attractiveness. Figure 5 connects these principles with more practical and systematic aspects. Indeed, implementing these principles in each university is needed, but many countries have fixed hiring and career procedures at the national level. Consequently, not all dimensions can be controlled by an

individual university (see the section on the national level). Nevertheless, in a given system with global rules, each university should implement and promote the most open and fair procedures.

Commitment to academic research

Academic research plays a central part in the social/economic role of higher education and research and in the development of universities. Consequently, modern universities aim to become a *research-friendly* environment with a significant valorization of research efforts by faculty to keep strong their motivation to engage in academic research.

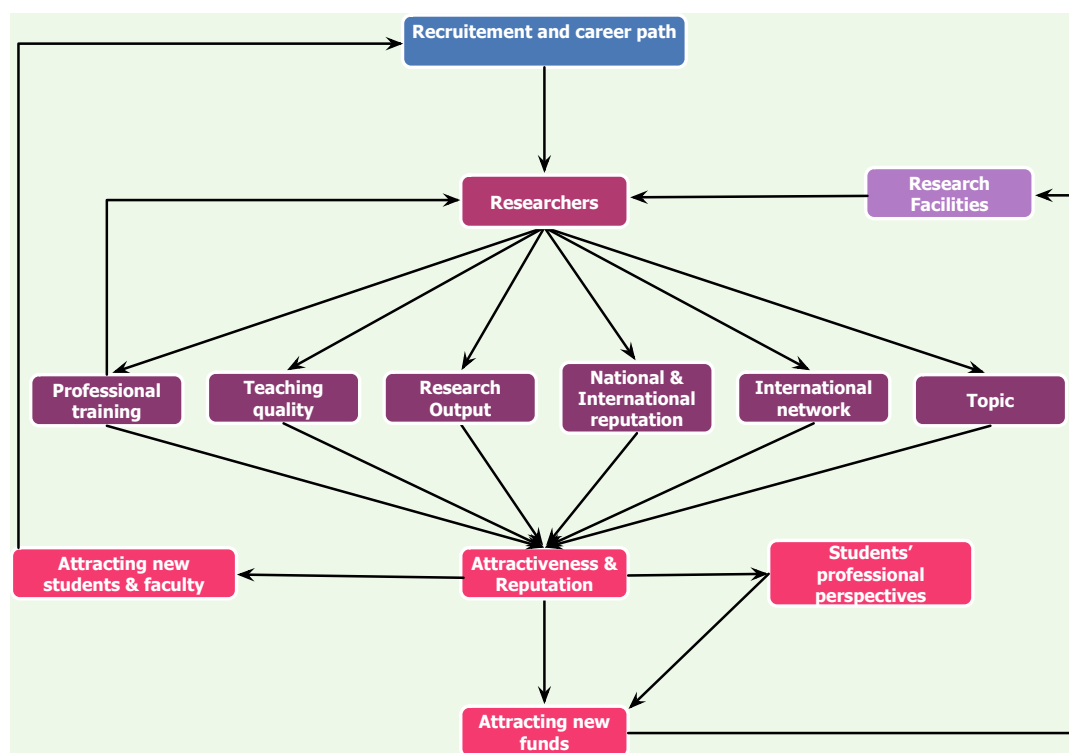


Figure 6. The central role of academic research

Figure 6 represents the central role that academic research plays in establishing the quality and attractiveness of a university. We can have a virtuous circle through these interdependencies when academic research is firmly supported in the university and enforces its attractiveness towards new students, researchers, and funds, which in turn enhances its ability to develop academic research. However, we can also have a vicious circle when a university neglects academic research and attracts less and less human resources and funds for developing it even if it changes strategy at one point. Going from a vicious circle

to a virtuous one may be difficult once the university puts itself in the former because of these positive feedback forces that impose strong inertia. Only a dedication of significant resources can help overcome such inertia, and all marginal efforts would generally be without any significant results.

Support and coordination at the national level

Last but not least, some critical components of these standards concern the global higher education and research ecosystem. They need to be developed and implemented at higher institutional levels than the individual universities. Indeed, many critical dimensions of higher education and research require coordination and support at the national level (see Figure 7). We have already discussed the importance of recurrent and stable public funds. External quality assessment is also one of them, as we have seen above. The legal framework also plays a vital role because it determines the modalities of many aspects of autonomy and governance of universities (including the professional status of the faculty).

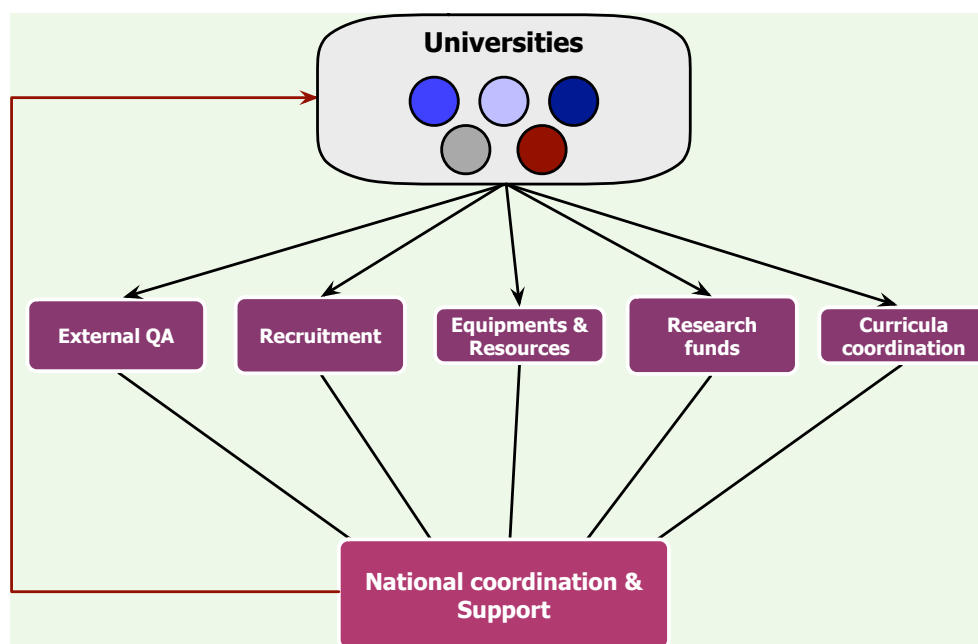


Figure 7. Support of higher education and research at the national level

Moreover, other operational dimensions also need coordination between universities:

- Coordination of faculty recruitment demands by different universities when public funds finance these positions;
- Acquisition of expensive equipment and resources (like access to journals) may need pooling resources at the national level;
- Allocation of public funds for research, depending on the shared criteria used for their assignment (like research performance);
- Pedagogical coordination of curricula between universities in different disciplines, such as obtaining a bachelor's or master's degree in a given domain, ensures competency standards for mobility between universities and companies hiring these graduates.

Given the essential role of this set of principles and organizational solutions in securing that higher education and research can satisfy society's demands, it is crucial to understand how close Cambodian higher education and research are to these international standards and how it can get closer to them.

In the following two sections, we will first consider the current situation of Cambodian higher education and research as we see it and propose some potential tools for strengthening it to close the gap with the international standards.

Challenges in the Cambodian higher education system

We can observe the following significant characteristics of the higher education system in Cambodia (MoEYS, 2021):

- 128 higher education institutions nationwide as of 2021, including 48 public (37,5%) and 80 private (62,5%) higher education institutions, under the control of 16 ministries and institutions.
- 80 higher education institutions are under the Ministry of Education, Youth and Sport control, of which 13 are public and 67 are private.
- 45 higher education institutions provide postgraduate education services, and 21 institutions also provide PhD-level education.
- These institutions mobilize 16,676 educators with the following academic levels:
 - ◆ 26.54%, a bachelor's degree;
 - ◆ 65.12%, a master's degree;
 - ◆ 4,1% of full-time faculty, a PhD degree.

- 201,900 students following different academic levels:
 - ◆ 85%, at the bachelor level;
 - ◆ 5% at the master level;
 - ◆ 0,5% at the PhD level;
 - ◆ 9,5% at an associate degree.
- The bachelor's degree students are distributed in the following areas:
 - ◆ 70% in social sciences: 42% in business-related subjects, 7% in law, 10% in foreign languages, 2% in tourism, and 9% in other social sciences and arts;
 - ◆ 30% in STEAM: 5% in basic science, 9% information technology, 8% engineering, 3% agriculture, and 5% health.
- Master's degree students study in the following areas:
 - ◆ 76% in social sciences;
 - ◆ 11% in humanities;
 - ◆ 8% in natural sciences;
 - ◆ 3% in agricultural sciences;
 - ◆ 2% in engineering and technology.

In this landscape, we consequently observe:

- A considerably high number of private institutions (62,5%) resulted from a rapid expansion since the foundation of the Norton University in 1997 when the privatization of higher education was allowed (Chet, 2009);
- A potential difficulty of coordination in an education system controlled by many ministries, potentially following contradictory strategies, a problem already signaled nearly 25 years ago (Ahrens & McNamara, 2013; Clayton & Yuok, 1997), along with the hope that this issue should be quickly resolved;
- An over-representation of social sciences and an under-representation of STEAM areas in the study fields;
- A dramatic loss of students between bachelor and master levels (the latter keeping only 5% of the students);
- A significant reduction in the student population during the COVID period;
- An under-representation of the PhD level in the faculty population.

From reading the Education Congress report (MoEYS, 2021), it is hard to have a clear vision of the *economic model* of higher education institutions, the strategies aimed by different institutions, and the diversification between public and private institutions. Interviews with various institutions and a relatively large literature on the evolution of Cambodian higher education and research help better to build such a vision.

These observations above let us think that the following potential fragilities may be an obstacle to the development of the Cambodian higher education system:

Fragility 1: Insufficient initial training of the faculty

The preceding statistics show a weakness in the initial training of the faculty (Ros & Sol, 2021). For example, one cannot expect a faculty member having only a master's degree or even only a bachelor's degree, sometimes obtained many years ago, to be a fully competent teacher and researcher under the current standards, which have become very demanding and very technical, not only in STEM disciplines but also in humanities and social sciences

Fragility 2: Biased economic model of the higher education institutions

Our interviews in the universities and more anecdotal conversations with colleagues show that the current economic model of the universities may introduce some considerable distortions in the incentive structure in the academic system: the relative weakness of their basic income, the weakness of research structures, and the limited role of research in the remuneration and advancement of the faculty seem to push the faculty towards heavy teaching loads (up to 30h per week, in several different universities in some cases), and do not encourage them towards academic research (Heng et al., 2022; Mak et al., 2019b; Oleksiyenko & Ros, 2019; Ros et al., 2020). This bias is enforced by the weak public financing of the higher education institutions that pushes them to tuition-based funding, on which they also have more autonomy than in public funding. Hence, a second vicious circle results from the necessity to attract students to tuition-based programs, which seems to fire a *race-to-the-bottom* since it is easier to reduce the fees (the price) than to increase the quality of the programs they offer (Ros & Sol, 2021).

Fragility 3: Weakness of academic research

As a consequence of the previous observation, academic research is the poor child of the university, failing to attract necessary resources and priority in many institutions and areas. When external resources are available, attracting them becomes the main driver of the research projects and implementing a research strategy at the university level becomes nearly impossible. The absence of perennial and institutionally recognized research teams is another difficulty in building persistent critical mass and strategy in the face of this continuous flow of decentralized projects and the transient research groups dedicated to them.

Fragility 4: Diversity without coherence?

Diversity is generally desirable in the higher education system. Still, it can only be productive in capacity building and creativity if it is the source of substantial synergies in the system and does not play against its coherence (Ahrens & McNamara, 2013; Chet, 2009; Sen & Ros, 2013). Given the limited number of highly qualified faculty at the national level, can we expect that these faculty can nourish 128 institutions with satisfactory academic accomplishments?

Fragility 5: Lacking critical mass

As a corollary to the preceding observation, can all these institutions attain a critical mass in administrative, financial, and research facilities and capabilities? This fragility is a corollary to the preceding fragilities: The dispersion of fully qualified human resources and other assets, which are already rare in the system (Fragilities 1-3), over a high number of institutions (Fragility 4), without much coordination between them, makes impossible for each of them to mobilize a level of these resources necessary for providing high-quality education and developing academic research.

Fragility 6: Weak coordination of offered professional perspectives

Are these universities and MoEYS able to accompany the large population of bachelor students to a good professional and/or scientific education at the

master's level, limiting strong disequilibria in the system, which can be a source of bottlenecks in the insertion in the professional life, and of a disappointment for the students, as well as of an inability to fully mobilize Cambodia's remarkable youth and their creativity?

Fragility 7: Incomplete governance structures

Last but not least, many dimensions of the governance principles and tools that have been discussed above are not yet implemented in the Cambodian higher education system. Indeed, the *academic councils* in many universities are yet to include a large composition ensuring their representativeness of different members and their integration with the economic and social environment of the universities. Accountability is also not fully secured at all levels. Consequently, complete autonomy continues to be a difficult target to attain (Mak et al., 2019a; Sok & Un, 2018b).

These fragilities result from the interaction between many dimensions of the Cambodian higher education system, starting with the current economic model of the universities. Overcoming them necessitates strategic policy measures at the system level, following the systemic nature of international standards we have considered in the first part of this article. These standards point to the final targets of reforms in higher education and research. They answer the question of "What?", but they do not answer a trickier question: "how." In the next section, we will consider potential measures that may facilitate convergence toward these standards.

Some potential measures for convergence toward international standards

Following the discussion on the above-mentioned issues, we propose some concrete actions that seem accessible on a short horizon.

A new economic model for the universities

Some of the measures can only be implemented at the national level, while under a new economic model for universities, others can be implemented by each university.

Fragility 2 discussed above underlines that the current economic model of Cambodian universities could introduce significant bias making their development quite problematic.

Some of the measures proposed here aim to change the corresponding components of this model. Still, without a global change in public strategy, universities will struggle continuously with obstacles met during the implementation of these measures.

Public universities would need:

- An institutional framework favoring the implementation of a more decentralized organizational structure with the delegation of all decisions to the most appropriate local level, including the financial ones (Mak et al., 2019a).
- Higher public financing (with autonomy and accountability) to change their current economic model that is mainly based on tuition fees, and hence on teaching in (not always a very high quality probably) professional programs (Mak et al., 2019b);
- A possibility of proposing higher wages to liberate the energy of their faculty;
- A fair advancement system for their faculty to motivate the latter during their whole career to engage fully in the development of their university and research (Ros et al., 2020);
- A national environment that helps universities attract more grants and private funds (potentially managed by a national foundation or a university when the latter's size permits it).

Potentially helpful measures

At the national level

- New composition and roles for the academic councils in universities to make them more representative through elections every five years, with more substantial participation in governance, in collaboration with the top management team;

- Alignment of the mandates of the rectors and associate rectors in accordance with the previous measure and with a maximum of two terms;
- Instituting a Scientific Council with external and foreign members (in particular with representatives of partner universities) in universities;
- Additional funding truly dedicated to academic research, but with access conditioned by the quality of proposed research projects and by the achievement of the projects proposed in the past;
- Coordination between ministries for establishing precise modalities for the implementation of the new professorship ranks sub-decree. Ministries should coordinate their efforts for building an attractive wage grid, clearly distinguishing the status of assistant/associate/full professorship positions;
- A national doctoral school on major disciplines through pooling competencies between national universities and beyond (from the ASEAN and other countries) for quickly building capability and forming future researchers;
- A national center for the management of research projects to relieve the strain on universities. Each university could initially send one or two persons (depending on the university's size and needs) to participate in this center and be trained to become the local expert in this area in their university and train other persons. Training sessions by international experts from the leading grant-giving organizations (EUFP, JICA, etc.);
- Dedicated funds to provide universities with access to the leading scientific journals in each field. It would be necessary to carry out first a national survey to determine the list of journals to include in the subscription negotiations with the editors.

At the university level

- Strategic autonomy of the management team, but in dialogue with a representative Academic Council and a Scientific Council;
- Adoption of an effective decentralized organizational structure with full implementation of necessary decisions delegation at the appropriate levels.
- Creation of an independent internal audit office;
- Creation of an internal information system for the collection of information about the activities in the university.
- An annual self-assessment based on a realistic and meaningful set of indicators, updated at least once a year before the annual meeting of the

Scientific Council and the end-of-year meeting of the Academic Council to check internally and externally the progress of academic operations;

- A sufficiently large and competent administrative and accounting team;
- Transparent and fair recruitment and advancement processes in the university;
- A strengthening of the faculty by facilitating their access to quality doctoral training, particularly through international partnerships. This training should aim to effective competency acquisition and transfer through a hands-on learning process with the actual capacity acquisition evaluated through a research project or a scientific article. A part of the training would hence cover the writing of scientific papers;
- Hiring processes based on transparent and realistic criteria. Universities should clearly define the expected role of each professorship grade (Yildizoglu, 2020c, 2020d). The hiring process should include external members (faculty from other universities and/or countries) to limit potential local favoritism;
- Ensure that research activities (projects, publications, etc.) count fully in career advancement;
- Persistent research teams that are not limited to specific projects and, hence, are an important component in the implementation of the research strategy of the university.
- A renewable yearly researcher status to promote research activities and allow teacher-researchers to obtain a sufficient income, partially or fully liberated from any teaching load, with interdiction of teaching elsewhere during this period (an immediate termination condition), the obligation of exhibiting actual research activities each year through publications in international journals starting with the second year of the status period. To be effective, this status should be adjoined by a bonus to the regular wage not to force the candidate to accept an income reduction, making such a position unattractive;
- Continuous amelioration of the ability to attract the best-educated high school students through broad information campaigns and clear rules;
- Internal assessment of the quality of academic programs and their relevance to the missions of the university;
- New advanced master programs in a language for which advanced textbooks exist and through which new competencies could be transferred, if necessary, by faculty temporally invited from other countries;

- A University-Industry Partnership Office to coordinate with national industry competency building and benefit from their experience, as well as valorizing applied research abilities of the university and attracting new funds;
- A graduate school that coordinates master's programs and, where applicable, doctoral programs.
- Development of international partnerships for teaching and research within the ASEAN and beyond.

At the individual level

Independently of the higher education system, a university's principal assets are the persons that compose it. Even if the current economic model of the universities can sometimes make it difficult, these individuals should never lose sight of the critical mission that they are called to play in the development of the Cambodian economy and society by giving the necessary knowledge, competency, and ability to the young population of the country.

Motivated by this mission, they should continue to develop their knowledge by exploring new approaches to the tasks they must fulfill, reading all the recent literature they can find on their domain, and exercising their intellectual curiosity by never abandoning the pursuit of scientific research. The capacity-building process needs to take place at all levels, national, university, and individual.

Tomorrow's modern universities cannot be built without these persons and their contributions. Only with such a continuous investment can they entirely play their role in developing their career, university, and country.

Conclusion

Several potential fragilities of the Cambodian higher education system we have discussed in this article are observed in many higher education systems worldwide, not only in developing countries. The most successful systems are the ones that have been able to create solutions for overcoming these fragilities, and these solutions indeed gave rise to international standards.

This article has discussed why these international standards have emerged and introduced some organizational principles and tools developed to facilitate their implementation. Our observations on the Cambodian higher education system underline the importance of developing different specific mechanisms and answering the “How?” question, starting from the institutional tools included in the large arsenal of laws, decrees, and sub-decrees already adopted. This article has also proposed some potential measures that would facilitate the convergence of the Cambodian higher education system toward the international standards and benefit from the solutions incorporated into them in fulfilling the expectations of society from this system.

Still, such measures necessitate substantial investment in development strategy and policy priorities. Even in the most developed countries, such a political engagement has become increasingly problematic since the 1990s (Bray, 2002). These countries can count, at least for some time, on the capacity accumulated historically or on pockets of excellence where the *elite* is reproduced. Developing countries have no such luxury and have to build their autonomy under current dire economic conditions. These conditions may make the policy trade-off in favor of education hard, but without such a trade-off, economic conditions in these countries will necessarily deteriorate. No development strategy can avoid giving a solid priority to education.

Acknowledgments

The author is very grateful to the editors of the *Cambodian Journal of Educational Research* and one anonymous referee who contributed to this article with their comments and suggestions. The ideas discussed in this article have benefited tremendously from discussions with his colleagues from MoEYS and universities and the participants in the National Conference on Outcomes and Impacts of Education Improvement Projects, February 25-27, 2022. The opinions expressed in this publication are those of the author. They do not purport to reflect the opinions or views of the organizations to which he belongs.

The author

Murat Yildizoglu is a Professor of Economics at the University of Bordeaux, from which he is currently on leave as an International Technical Expert put at the disposition of MoEYS in Cambodia. He previously had the pleasure of teaching in different universities in Europe and other continents and participating in national and international assessment programs as an expert or lead expert. His professional website can be consulted at the following address: <https://yildizoglu.fr>.

Email: myildi@gmail.com

References

- Aghion, P., & Howitt, P. (1998). *Endogenous Growth Theory*. The MIT Press.
<https://mitpress.mit.edu/books/endogenous-growth-theory>
- Ahrens, L., & McNamara, V. (2013). Cambodia: Evolving quality issues in higher education. In L. P. Symaco (Ed.), *Education in South-East Asia* (pp. 47–70). Bloomsbury Academic.
<https://www.bloomsbury.com/us/education-in-southeast-asia-9781441173348/>
- Aithal, S., & Aithal, S. (2019). Building world-class universities: Some insights & predictions. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 4(2), 13-35.
<https://doi.org/10.47992/IJMTS.2581.6012.0067>
- Altbach, P. G. (2007). Introduction: The underlying realities of higher education in the 21st century. In P. G. Altbach & P. M. Peterson (Eds.), *Higher education in the new century: Global challenges and innovative ideas* (pp. xv-xxii). Sense Publishers. <https://doi.org/10.1163/9789087903169>
- Bray, M. (2002). *The costs and financing of education: Trends and policy implications* (Education in Developing Asia No. 100501). Asian Development Bank. http://cerc.edu.hku.hk/wp-content/uploads/2013/11/costs_financing.pdf
- Chet, C. (2009). Higher education in Cambodia. In Y. Hiroso & Y. Kitamura (Eds.), *The political economy of educational reforms and capacity development in Southeast Asia: Cases of Cambodia, Laos and Vietnam* (pp. 153–167). Springer. https://doi.org/10.1007/978-1-4020-9377-7_10
- Clayton, T., & Yuok, N. (1997). Cambodia. In G. A. Postiglione & G. C. L. Mak

- (Eds.), *Asian higher education: An international handbook and reference guide* (pp. 21–36). Greenwood Press. <https://www.abc-clio.com/products/b1566c/>
- ESCAP. (2021). *The science, technology and innovation ecosystem of Cambodia*. <https://www.unescap.org/kp/2021/science-technology-and-innovation-ecosystem-cambodia>
- Heng, K., Hamid, M. O., & Khan, A. (2022). Academics' conceptions of research and the research-teaching nexus: Insights from Cambodia. *International Journal of Educational Development*, 90, 1-11. <https://doi.org/10.1016/j.ijedudev.2022.102569>
- Mak, N., Sok, S., Un, L., Bunry, R., Chheng, S., & Kao, S. (2019a). *Governance in public higher education in Cambodia* (Working Paper No. 114). CDRI. <https://cdri.org.kh/publication/governance-in-public-higher-education-in-cambodia>
- Mak, N., Sok, S., Un, L., Bunry, R., Chheng, S., & Kao, S. (2019b). *Finance in public higher education in Cambodia* (Working Paper No. 115). CDRI. <https://cdri.org.kh/publication/finance-in-public-higher-education-in-cambodia>
- MISTI. (2021). *Cambodia's science, technology and innovation roadmap 2030*. MISTI. <https://www.misti.gov.kh/public/file/202108261629990117.pdf>
- MoEYS. (2021). *Education congress. The education, youth and sport performance in the academic year 2019-2020 and goals for the academic year 2020-2021*. <http://www.moeys.gov.kh/index.php/en/education-congress-2020.html>
- Mokyr, J. (2005). Chapter 17 – Long-Term Economic Growth and the History of Technology. In P. Aghion & S. N. Durlauf (Eds.), *Handbook of Economic Growth* (Vol. 1) (pp. 1113–1180). Elsevier. [https://doi.org/10.1016/S1574-0684\(05\)01017-8](https://doi.org/10.1016/S1574-0684(05)01017-8)
- Nelson, R. R. (1996). *The Sources of Economic Growth*. Harvard University Press. <https://www.hup.harvard.edu/catalog.php?isbn=9780674001725>
- Oleksiyyenko, A., & Ros, V. (2019). Cambodian lecturers' pursuit of academic excellence: Expectations vs. reality. *Asia Pacific Journal of Education*, 39(2), 222–236. <https://doi.org/10.1080/02188791.2019.1621797>
- Ros, V., Eam, P., Heng, S., & Ravy, S. (2020). *Cambodian academics: Identities and roles* (Working Paper No. 120). CDRI. <https://cdri.org.kh/publication/cambodian-academics-identities-and-roles>

roles

- Ros, V., & Sol, K. (2021). The quest for world-class universities: A goal for Cambodian universities? *Cambodian Journal of Educational Research*, 1(2), 24-40. <https://cefcambodia.com/cjer-volume-1-number-2/>
- Salmi, J. (2009). *The challenge of establishing world-class universities*. World Bank. <https://openknowledge.worldbank.org/handle/10986/2600>
- Sen, V., & Ros, S. (2013). *Anatomy of higher education governance in Cambodia* (Working Paper No. 86). CDRI. <https://cdri.org.kh/publication/anatomy-of-higher-education-governance-in-cambodia>
- Sok, S., & Un, L. (2018). Higher education governance in Cambodia: An update. *Internationalisation of Higher Education – Policy and Practice*, 5-35. <https://www.handbook-internationalisation.com/en/handbuch/gliederung/#/Beitragsdetailansicht/192/2480/Higher-Education-Governance-in-Cambodia---An-Update>
- UNESCO. (2016). *UNESCO science report: Towards 2030*. <https://unesdoc.unesco.org/ark:/48223/pf0000235406>
- Yildizoglu, M. (2020a). *Quelques éléments sur les systèmes d'évaluation des universités* [Some elements on the university evaluation systems]. MoEYS and Expertise France.
- Yildizoglu, M. (2020b). *L'évaluation des universités par le HCéRES Campagne d'évaluation des universités (2020-21)* [Evaluation of universities by the French HCéRES during the evaluation campaign (2020-21)]. MoEYS and Expertise France.
- Yildizoglu, M. (2020c). *The system of academic ranks in France, and its lessons* (Note on Academic Ranks No. 1). MoEYS and Expertise France.
- Yildizoglu, M. (2020d). *Criteria used by disciplinary CNU sections in France* (Note on Academic Ranks No. 1). MoEYS and Expertise France.

Cambodia's gender policy: An analysis of women and girls' education strategies under the Neary Rattanak IV Strategic Plan (2014-2018)

Molika Heng

*The University of Auckland
Auckland, New Zealand*

Abstract

In 1999, Cambodia's Ministry of Women's Affairs established the first Neary Rattanak Strategic Plan to build Cambodian women's capacity by offering them more opportunities and access to education. From early 1998 to 2017, Cambodia showed good progress in increasing girls' school enrolment. Later in 2018, the final year of Neary Rattanak IV's implementation, the percentage of girls' enrolment in Cambodia's primary schools declined. This study analyzes the implementation of education strategies in Neary Rattanak IV by using the seven steps of Mintrom's (2012) policy implementation analysis to examine whether the strategies have been well implemented. From the analysis, it seems that the education strategies have indeed been successful in their implementation and have reached their targets. However, the study has discovered some potential obstacles and shortcomings that the government may have to act upon through its education and gender policy. Those shortcomings and difficulties, including traditional norms, discrimination against women in employment, and safety issues, have impacted the implementation of the education of women and girls in the Neary Rattanak IV Strategic Plan.

Keywords: Neary Rattanak IV Strategic Plan; policy implementation; education of women and girls; education strategies; Cambodia

ARTICLE HISTORY

Received 1 November 2021

Accepted 9 July 2022

Introduction

Providing opportunities for women and girls to receive a proper education is crucial in reducing gender inequality (World Bank, 2020). In recognition of the issue of gender inequality in the education sector, Cambodia's Ministry of Women's Affairs (MoWA) established the first Neary Rattanak Strategic Plan (1999-2003) in 1999, followed by Neary Rattanak II (2004-2008), Neary Rattanak III (2009-2013), and Neary Rattanak IV (2014-2018), to achieve mainstream gender equality and build Cambodian women's capacity by offering them more opportunities and access to education. Currently, MoWA is implementing its fifth Neary Rattanak Strategic Plan 2019-2023. From early 1998 to 2017, Cambodia showed good progress in increasing girls' school enrolments (Ball et al., 2019). Later in 2018, the final year of Neary Rattanak IV's implementation, the percentage of girls' enrolments in Cambodia's primary schools declined. This decrease in enrollment posed questions about the effectiveness of the education strategies used in Cambodia's national gender policy, Neary Rattanak IV, and its implementation.

The objective of the Neary Rattanak IV Strategic Plan was to promote gender-equal access to education, particularly to encourage the participation of vulnerable women and girls in education services, such as short course training and career consulting, through social accountability measures, awareness-raising activities, and financial assistance. Advocating gender-responsive social attitudes and promoting positive images of women were also one of the objectives stated in the Strategic Plan (MoWA, 2019).

As a national gender policy, Neary Rattanak IV encompassed four thematic areas: (1) economic growth, (2) access to social services and protection, (3) cross-cutting issues, and (4) institutional strengthening and capacity development toward gender equality (MoWA, 2014a, p. 16). These are shown in Table 1.

Table 1: *Four thematic areas of the Neary Rattanak IV Strategic Plan*

Thematic areas	Targets
1. Economic Growth	1.1. Women's Economic Empowerment 2.1. Education of Women and Girls, and Behavioral Change
2. Access to Social Services and Protection	2.2. Health, HIV and Nutrition of Women and Girls 2.3. Legal Protection for Women and Girls
3. Cross-Cutting Issues	3.1. Women in Public Decision-Making and Politics; Gender Responsive Government Policies and Reform Programs 3.2. Gender and Climate Change, Green Growth and Disaster Risk Management
4. Institutional Strengthening and Capacity Development toward Gender Equality	

The first target in the second thematic area, “education of women and girls, and behavioral change,” focuses on promoting equal access to education for Cambodian women and girls (MoWA, 2014a). This target consists of six strategies. These six strategies include the improvement of the technical capacity of relevant officials in the education sector, the growth of kindergarten facilities, the coordination of the National Action Plan, the promotion of women's positive image, the study on the needs of vulnerable groups of women, and the provision of gender comprehensive education to sub-national administration. The first strategy was used to encourage and monitor the development of education projects and programs for vulnerable groups of women, while the second strategy focused on the general reduction of overage enrollment and dropout in primary education. The last four strategies covered matters of positive attitudinal change toward gender equality and social

welfare. These six strategies were planned to address the existing education inequality and are expected to improve educational opportunities for Cambodian women and girls (MoWA, 2014c).

Statement of the problem

Even though Cambodia has had a concrete strategic plan to improve girls' access to education, the results were still far from the expected outcome of the plan. According to the Global Economic Data, Indicators, Charts & Forecasts (CEIC), the gross percentage of girls enrolled in Cambodian primary school declined from 96.9% in 2015 to 90.26% in 2018 (CEIC, 2018). The percentage of enrollment was considered high. However, it has decreased since 2015, a year after the implementation of Neary Rattanak IV. Moreover, some girls also dropped out in the middle of primary school or before they reached secondary education (CEIC, 2018). There are various reasons for these undesirable results. Traditionally, girls have been expected to carry out more domestic chores than boys; thus, the opportunity cost is high for girls to attend school. Parents may not invest in their daughters' education because they think educating women to higher levels is unnecessary due to women's perceived lower status, particularly when economic resources are scarce. Moreover, traditional and social attitudes are deeply rooted in society and prevent women from fully utilizing their capacities and exercising their rights, including the right to education (MoWA, 2014e).

Given those factors, doubts arose about Neary Rattanak IV and its implementation as the policy was initiated to tackle the mentioned issues. According to Mintrom's (2012) analytical strategies, the unsatisfactory outcome of a particular policy is the result of either theory failure or implementation failure. Therefore, to achieve the expected outcome, a policy has to be well designed and carefully implemented.

Research objectives

Having raised concerns regarding the quality of the Neary Rattanak IV policy and the way it was implemented, this study aimed to explore the implementation of the first target of the second thematic area (i.e., education of women and girls) of Neary Rattanak IV and behavioral change to evaluate the

success of its implementation. Due to time and resource constraints, this study did not evaluate the effectiveness of the policy in terms of changes over time, so the focus was only on its implementation.

Dropout issues in rural primary schools in Cambodia

The dropout and repetition rates in Cambodia remain persistent challenges, especially at the secondary school level. The Asian Development Bank ([ADB], 2014) indicated that in the school year 2012–2013, 87.4% of Cambodian children completed primary school, yet only 53.6 percent enrolled in the lower secondary school stream. Hence, approximately 34% of children gave up their education after primary school. The lower secondary school completion rate was 10% to 14% lower than the enrollment rate in 2013; the completion rate was even much lower in rural schools (ADB, 2014).

According to Tuy (2019), the women and girls' education target of Neary Rattanak IV was based on the belief that it would improve women and girls' education levels. There is a need to prevent overage enrollment and primary school dropout (Tuy, 2019). Kitamura et al. (2016) observed that overage enrolment and primary school dropout were a result of a lack of family economic opportunities combined with inadequate access to education. For financial and economic reasons, many families who live in rural areas are forced to move to urban areas or the capital city to look for employment opportunities. This trend has, in turn, placed more stress on schools in urban areas or the city. According to an investigation of enrollment trends in Phnom Penh carried out by the Kampuchean Action to Promote Education (KAPE) in 2013, one of the common problems for students was overage enrollment, resulting in unsuitability between students' age and learning environment, which affected their learning motivation (KAPE, 2013).

Tuy (2019) stated that to respond to overage enrollment and early school dropout problems, Neary Rattanak IV education strategies focused on building early learning centers in Cambodia and enhancing teacher capacity and learning materials. Girls and female teachers were named as specific populations of interest for achieving the objectives of the Neary Rattanak IV education plan. Simultaneously, Anderson and Grace (2018) found that

Cambodia's teachers play an instrumental role in protecting girls at school, helping female students stay longer in school.

Positive attitudes towards gender equality and the promotion of social welfare

So et al. (2013) explored the implementation of policies to address violence against women in Cambodia. They claimed that positive and responsive interactions with male counterparts and societal attitudes toward women were believed to have a significant effect on women's performance and self-confidence. The critical challenges to implementing gender-related policies cited by respondents across all levels of society were associated with gendered norms, attitudes, and behaviors in women's communities (So et al., 2013).

Tuy (2019) discussed gender-responsive attitudes regarding educational discrimination against Cambodian women in his study. He explained that the last objective of Neary Rattanak IV's education of women and girls involved four strategies that aimed to coordinate the development and promotion of a positive image of empowered women and girls among their communities and individuals, especially among men and boys. The objectives and activities in this target were considered to challenge Cambodia's tradition in which women are expected to respect and follow their husbands' guidance. Tuy (2019) added that people in Cambodia, especially the older generations, still think in traditional ways about women, which is why many women could not pursue higher education. In light of these conditions, Tuy (2019) also acknowledged the necessity of implementing the last four strategies of Neary Rattanak IV's education of women and girls.

Research gap

Based on a review of related studies above, it could be seen that there are studies on the purpose and importance of Neary Rattanak IV education strategies in response to Cambodian women's challenges in accessing education. However, there remain some gaps in the literature. First, almost all the previous studies tend to focus only on Cambodia's existing gender education issues, the objectives of the Neary Rattanak IV strategies, and the importance of this policy. There is not yet a study that examines the

effectiveness of the implementation of such strategic activities. Second, this study will use policy implementation analysis to evaluate the implementation of each key activity in Neary Rattanak IV education strategies claimed by Tuy (2019) to be vital to tackling Cambodian women's education issues. The use of policy implementation analysis as a method in this study also fills a gap in the literature since previous studies do not critically look at the role of MoWA's strategic plan in achieving and dealing with women's education challenges in Cambodia.

Table 2. *Seven steps of Mintrom's policy implementation analysis*
(Mintrom, 2012, pp. 292-295)

Steps	Activities
Step 1	Identify the overall purpose of the new policy, where it will be implemented, and how success has been defined
Step 2	Identify who will be responsible for policy implementation and the behavioral changes that implementation is expected to produce
Step 3	Specify the institutional, organizational and procedural changes required to support the new policy
Step 4	Treat implementation as a project, note the key tasks required to establish the new policy context
Step 5	Identify any significant threats to successful implementation and how they can be addressed
Step 6	Consider how institutional inertia might hinder change and how it can be overcome
Step 7	Ensure provisions have been made for the evaluation of the new policy and associated programs.

Analytical tool

To evaluate the degree to which the implementation of Neary Rattanak IV's education of women and girls and behavioral changes was effective, this study employed Michael Mintrom's policy implementation analysis as an analytical tool. Mintrom (2012) established seven steps of policy implementation analysis as a mechanism to evaluate how well a particular public policy is implemented.

Hassena et al. (2016), who reviewed Mintrom's policy implementation steps, claimed that they were an up-to-date and reliable process for policy implementation analysis. Another review by Pacheco-Vega (2016) also claimed that Mintrom's work, called Contemporary Policy Analysis, on the division of policy analysis into 17 chapters, including policy implementation analysis, gender, and racism analysis, is instrumental. The Contemporary Policy Analysis focuses not only on cost-benefit analysis but also on other areas that apply to a range of people such as students, policy analysts, and practitioners (Pacheco-Vega, 2016). Mintrom's (2012) policy implementation analysis consists of seven steps, as seen in Table 2.

All the seven steps were applied to analyze Neary Rattanak IV's education of women and girls, and behavioral changes. The evaluation involved reviewing existing government and non-governmental reports and studies on the actual implementation of the education framework for women and girls in Neary Rattanak IV to reflect on each of the seven steps of the policy implementation analysis.

Analysis of the implementation of Neary Rattanak IV's second strategic framework: Education of women and girls, and behavioral changes

In the following sections, the study applied Mintrom's (2012) seven steps of policy implementation analysis to analyze the second strategic framework of Neary Rattanak IV, namely the education of women and girls, and behavioral changes.

Step 1: The overall purpose

Besides the objectives indicated in the policy itself, the target plan of Neary Rattanak IV was viewed by the United Nations Development Program as a core gender principle in Cambodia (WoMA, 2014d). As a policy, Neary Rattanak IV outlines the essential part of the national gender mainstreaming strategic plan, including the provisions for promoting gender equity in education, supporting education for women and girls, and eliminating discrimination against women. One of the purposes of the education of women and girls was to articulate Cambodia's inter-sectoral approach to gender mainstreaming, offering provisions for girls and women's social and education entitlements. An inter-

sectoral approach to gender mainstreaming is believed to help confirm existing knowledge and add new insights into innovation in Cambodia's education system (Khieng et al., 2015).

Neary Rattanak IV does not explicitly define the success of either the entire policy or each target in the policy itself, as Mintrom recommends in his policy implementation analysis. In the policy action plan, however, each key activity of Neary Rattanak IV comes with the indicator(s) of the work that needs to be accomplished. Pintér et al.'s (2004) study on the use of indicators in policy analysis demonstrated that policymakers could create an indicator for their policy paper based on the actual type of policy. There is no one standard rule for developing the policy indicators; however, they all are used to strengthen policy planning and evaluation. Moreover, to increase a policy's likelihood of success and its profitability, it is important to identify and establish clear and measurable indicators (Pintér et al., 2004).

Step 2: Key actors in policy implementation

Collaboration among Cambodia's ministries

Under the Neary Rattanak IV Strategic Plan, MoWA also worked with the Ministry of Economy and Finance (MEF) in collaboration with all line ministries to ensure the national programs associated with vulnerable groups of women received a national budget in line with gender-responsive budgeting processes. A report by the Japan International Cooperation Agency (JICA) on Gender Mainstreaming for Women's Economic Empowerment suggested that the purpose of the collaboration between MoWA and MEF is to strengthen MoWA's capacity for planning, monitoring, and evaluation as well as to build up the capacity of the Gender Mainstreaming Action Plans to integrate gender equality into line ministries' policies and budgets (JICA, 2018).

The establishment of new government agencies

According to the policy brief of the Cambodia Gender Assessment, MoWA is responsible for the protection of Cambodian women's rights. MoWA ensures women's rights are fulfilled by initiating sectoral programs in education, health, and economic empowerment and setting up committees to address

women's special issues. The Program-Based Approach Committee (PBAC) was one such committee. It was set up in late 2012 and became active in 2014 during Neary Rattanak IV's implementation. PBAC's work was to direct and coordinate the formulation and implementation of the program-based approach to gender equality. Since 2014, PBAC has played a significant role in mobilizing resources and capacity building around the program-based approach, following the guidelines of the Public Administrative and Public Financial Management Programs (WoMA, 2020).

Step 3: Behavioral and procedural changes of the government

The changes in existing agencies can be divided into three levels: national, community, and individual. In terms of the national level, the National Committee for Upholding Social Morality and Women's and Khmer Family Values is an institution in charge of operating, checking, and updating the national action plan related to women's protection and gender equality. The committee's work was to ensure that plans were up-to-date and responded to the actual situation to serve Cambodian women's interests and solve their ongoing problems (Farha, 2009). At the community level, MoWA and the Ministry of Education, Youth and Sport (MoEYS) worked with the media to distribute information on the status and role of Cambodia's women to youth, families, and the community through television, radio, websites, and magazines (United Nations, 2020). Another task assigned to MoWA under the fourth strategy of education of women and girls was to provide training on the empowerment of women, gender equality, gender inclusiveness, and social equity to national and provincial-level officials. Prior to implementing the Neary Rattanak IV policy, gender and education training were focused only on girls, which was the work of MoEYS. However, MoWA had a shared responsibility with MoEYS in terms of gender-related training since the target trainee group was expanded to women regardless of age. With the knowledge of gender equality, MoWA and the relevant ministries were also required to conduct an evaluation study on gender-related matters such as violations and discrimination against vulnerable women to generate a report as a reference to set up response measures (So et al., 2013). As reported in Cambodia's sixth periodic report on the elimination of discrimination against women, for accountability purposes and to promote sub-national administrative participation, the budget plan by MoWA has to be double-checked by Sub-

National Administration and the National Committee for Sub-National Democratic for Human Rights (WoMA, 2020).

Concerning the procedural changes at the individual level, it is very important to embed knowledge and a sense of gender-sensitive role models among Cambodian men and boys. To achieve this task, MoWA and MoEYS were responsible for working together to initiate training courses, workshops, public forums, and awareness-raising campaigns on gender equality, women's well-being, and social morality. A study by the Parliamentary Institute of Cambodia suggested that the sub-national authorities have encouraged and increased discussions on topics of gender equality and vulnerable women's difficulties in public forums and school debate events (Kem et al., 2019).

Step 4: The development of projects or education programs

As a national policy, Neary Rattanak IV acted as a guideline for local and international programs that aim to improve the quality of Cambodian girls and women's education. For instance, in 2014, the Asian Development Bank (ADB) launched a project called Enhancing Education Quality to improve learning materials, laboratories, and libraries in order to expand learning resources and encourage students' enrollment, especially female students who live in rural areas (ADB, 2016). The support from ADB is in line with Neary Rattanak IV's strategic objectives to increase access of girls and women to education through material and financial assistance. Furthermore, ADB's work has contributed to various papers and policy briefs on education empowerment, which in turn formed the basis of Cambodia's gender assessment, resulting in improvement in gender equality (ADB, 2015).

Along with the Enhancing Education Quality project, the implementation of education strategies for women and girls and behavioral changes also inspired and supported international education projects in Cambodia, such as the World Bank's Higher Education Improvement Project (HEIP). The project was approved by the World Bank in 2018 with a fund of US\$ 90 million for a period of six years (Heng, 2020). With MoEYS as the executing agency, the project was designed to focus on specific education fields such as science, technology, engineering, and mathematics (STEM) and agriculture. With specific targeted areas, the overall objective of HEIP is to reduce obstacles to vulnerable female

students' access to education by expanding classroom facilities, building dormitories, strengthening quality assurance, and working with relevant partners to improve the curriculum of the priority subject areas (World Bank, 2018). Indeed, the project's objective is aligned with one of the key activities outlined in the first strategy of women and girls' education in Neary Rattanak IV, which was to reduce education barriers and address girls and women's needs in their educational journey.

In addition to responding to problems related to overage and early dropout, the education strategies in Neary Rattanak IV focused on building early learning centers and enhancing teacher capacity and learning materials. With MoEYS as a lead ministry in this strategy, the third education program, called Strengthening Teacher Education Programs, was launched in 2018. His Excellency Nath Bunroeun, the Secretary of State of MoEYS, explained that the program was built with the financial support of a US\$20.6 million grant from the Global Partnership for Education, providing complementary materials to assist early grade teachers in enriching their teaching practice and skills (Roolvink, 2018).

Overall, Cambodia's early education system needs to be improved; STEM tends to support early-grade education in general rather than focus only on early education for vulnerable groups of girls. Based on the Neary Rattanak IV Strategic Plan to strengthen teachers' teaching ability, this effort will still not be enough without participation from students, parents, and the community. Therefore, MoEYS has been working with MoWA and the Ministry of Labour and Vocational Training to reduce gender stereotypes in Cambodian people's mindsets by running campaigns and incorporating human rights courses such as education rights into the school curriculum and teaching methodology (Tuy, 2019).

Step 5: Significant threats to policy implementation

Financial constraints

Undoubtedly, Neary Rattanak IV, as Cambodia's gender strategic plan, also encountered a financial deficiency in its implementation. Most of the activities in Neary Rattanak IV's education of women and girls were developed into an

annual program that required consecutive implementation from 2014 to 2018 (MoWA, 2019). Cambodia's national budget was insufficient to cover all the education programs; therefore, some of the projects were run with the support of international institutions, such as ADB and the World Bank. Financial means remain a challenge for the Cambodian government to implement gender policy as the country still largely depends on international donors. In 2019, MoWA acknowledged financial resources as a substantial obstacle to policy enforcement in advancing women's education. Because of financial constraints, MoEYS also had to prioritize its education programs on higher education. As a result, lower educational levels, such as secondary school, faced financial insufficiency in terms of improving learning materials and learning space (MoWA, 2014b).

Inadequate skills and human resources

According to ActionAid Cambodia (2018), even though the implementation of gender policy continued, the outcomes were still below expectations, reflecting ineffective policy implementation due to limited human resources in Cambodia. MoWA also recognized the lack of human resources as the gap in implementing policies and plans at all levels of education and institutions. Although it could be seen that the education policy framework had improved remarkably, there were still insufficient human resources and skills and a lack of clear guidelines to carry out the enforcement of the gender strategies. In addition, MoWA (2014a) noted that there were considerable gaps in the education policy implementation at the sub-national level as the human resource capacity in gender mainstreaming in communes and villages remained weak.

Step 6: Challenge of institutional inertia

Cultural and social norms

It could be seen that while education and gender policies exist and are sufficient for the country, commitment to their implementation is limited (Maxwell et al., 2015). The policy initiative to increase female students exemplified in the Neary Rattanak IV target largely had little impact due to the lack of internal motives and an effective system to support the policy. Cambodians' mindsets and

internal motives are heavily influenced by conservative, traditional norms that value men more than women and perpetuate gender power imbalances (Maxwell et al., 2015). Regardless of Neary Rattanak IV's efforts to increase female students' school enrollment and completion, a report by the United States Agency for International Development ([USAID], 2018) on women's literacy in Cambodia showed that female students' secondary school completion rate was still significantly below the average of low-to-middle-income countries. In 2017, two years after Neary Rattanak IV was implemented, the girls' secondary school completion rate was 42.7%, which remained low compared to the previous years (USAID, 2018). The undesirable outcome could result from many causes; however, the cultural barrier was acknowledged as the principal and critical concern for girls' access to education in Cambodia (USAID, 2018).

Discrimination and low employment opportunities

In Cambodia, most top professional positions, such as managers or directors, are held by men in both the public and private sectors. In the government, women represented only 20.3% of parliamentarians between 2008 and 2015 (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2015). Discrimination against women in the job market could markedly impact the attitudes toward education for girls and women. Moreover, low employment opportunities could discourage girls from getting an education and lead them to believe that education is not necessary for them (UNESCO, 2015). Thus, the negative cultural values, employment attitudes, and practices in Cambodia, which reinforced the subordinate role of women and hindered their equal participation in all spheres of life, needed to be addressed by the gender policies for effective implementation (UNESCO, 2015).

Financial resources in Cambodian families

Due to policies concerning the education of women and girls, which included disseminating the importance of girls' education to parents, most parents changed their perspectives toward their daughters and supported them in pursuing higher education. Moreover, many parents still prioritized their sons when it came to education if they were not able to send all their children to school (Tuy, 2019). It is known that boys and girls have different mental and

physical structures, which means different responsibilities and expectations. Thus, a comparison is often made between the two genders regarding who could achieve more, become more powerful, or be more productive. The answer is often boys; therefore, they are usually chosen to send to school while girls are kept at home to help with the housework. Consequently, most women grow up lacking qualifications and skills, which severely restrict their job opportunities (Tuy, 2019).

Safety concerns

Women and girls' safety is another challenge to the education of women and girls targeted in Neary Rattanak IV. This is understandable given that safety has been considered one of the barriers for Cambodia's female students (Ngeth, 2018). Due to safety concerns, many parents hesitate to let their daughters go to school far from home. In urban areas, safety is not really a big problem because many schools are close to where the people live and work. It was reported that female children living in the northeastern part of Cambodia faced the safety problem, as there was a lack of schools in remote areas. For example, some students had to walk more than 12 kilometers from their houses to school in most of the rural areas of Ratanakiri province (Ngeth, 2018). The long distance between home and school poses a concern for students, especially for girls, as safety along the roads is not completely assured for them. A 2016 report by the Cambodian League for the Promotion and Defense of Human Rights ([LICADHO], 2016) showed that there were 282 cases of rape or attempted rape. The cases involved 292 victims, 217 of whom were children under 18 years old. As women and girls' safety is a major concern, it is an obstacle not only to their education but also to their physical and mental well-being. Therefore, it is recommended that women's education policy and safety policy, such as the Village and Commune Safety Policy, should be simultaneously implemented for a better outcome (So et al., 2013).

Step 7: Evaluate the provision of education of women and girls

The Cambodian government recognized the evaluation phase as one of the most effective stages in achieving its various policies. Therefore, it launched many monitoring and evaluating programs over the preceding decade. For instance, it established the Monitoring and Evaluation for the National Strategic

Development Plan Implementation System (MENI) Orientation Guidelines, led and coordinated by the Ministry of Planning. Since it concerns gender and equity, this guideline has been outlined below to supplement and operationalize the MENI document by assimilating gender-responsive and equity-focused aspects in the evaluation (Royal Government of Cambodia [RGC], 2016). To ensure unbiased guidelines and avoid conflicts of interest, MENI was drafted with broad consultations from relevant stakeholders, such as inline ministries, civil society organizations, and development partners, before getting approval from the national working group for monitoring and evaluation of the implementation of the National Strategic Development Plan in 2014 (RGC, 2016).

Discussion and conclusion

As a result of using Mintrom's (2012) analysis to assess Neary Rattanak IV education strategies, this study shows that the strategies were initiated with clear objectives and responsible actors to deal with Cambodia's gender inequality issues. Besides the existing ministries such as MoWA, new agencies were established to carry out different roles and bring about positive behavioral and procedural changes regarding gender equality at all societal levels, from the individual to the national level. Between 2014 and 2018, many education projects and programs were created in response to the mission of the first education strategy. Education projects such as HEIP and Strengthening Teacher Education were reported to significantly contribute to giving Cambodia's women and girls more opportunities to access education and making the process easier. Additionally, many social and school events were created to allow for discussion and debate on the topic of gender equality and women's education in recent years, which directly raised the awareness of Cambodians, especially parents, about the importance of women and girls' education.

With the ongoing implementation of these educational activities, the government appointed the Cambodian National Council for Women as the institution responsible for evaluating and monitoring the implementation of Neary Rattanak IV strategies. Regarding the evaluation process, Neary Rattanak IV went through a comprehensive evaluation, starting from the baseline evaluation supported by a series of donor-drafted policy briefs. The policy was initially based on detailed background papers, and after many steps

of baseline evaluation, it developed into a national gender policy. A year after the completion of Neary Rattanak IV's implementation, MoWA submitted a report to the government stating that Neary Rattanak IV's education mission for girls and women had been accomplished and brought fruitful results and new life for women and girls, especially those in vulnerable groups (MoWA, 2019).

In line with the above findings, it can be concluded that girls and women's education strategies under Neary Rattanak IV were effectively implemented based on the Mintrom policy implementation analysis. According to the Education Congress (MoEYS, 2019a), the enrollment in lower secondary education was increased, while dropout was reduced. There was an increase from 53.8% in 2015-2016 to 59.1 percent in 2018-2019 in the gross enrollment rates in lower secondary education (MoEYS, 2019b). Moreover, MoEYS also worked toward achieving the goals of inclusive and equitable education, as evidenced by the implementation of an Inclusive Education Program for preschools in Siem Reap, Banteay Meanchey, Battambang, Kampong Chhnang, Kampong Thom, Prey Veng, Ratanakiri, Kratie, Preah Sihanouk, Oddar Meanchey, and Phnom Penh. This program is linked with 542 public preschools, covering 453 children (208 were girls) with disabilities (MoEYS, 2019b). This could be seen as an influence of Neary Rattanak IV's education for girls and women on the improvement of Cambodian girls' education. With this successful implementation, however, there remain difficulties and shortcomings that should have been recognized and addressed. What follows are some key points that policymakers should consider for better implementation and impact of future gender and education policies in Cambodia.

Remaining challenges and recommendations

Unclear definitions of policy success

Two indicators, the establishment of new daycare centers and education events, were mentioned in Neary Rattanak IV's second strategy of education of women and girls. They are considered targeted activities to be implemented for policy success. Regarding the establishment of new daycare centers and education events, the policy did not outline a specific or expected number of daycare

centers or events to be established. Moreover, the policy did not prioritize provinces or areas in Cambodia that face a lack of daycare facilities and are therefore in greater need than others. Without setting a clear number of activities and establishments that need to be initiated and having clear priority areas, it is difficult for the government and policymakers to assess whether the Neary Rattanak IV education strategy has been implemented as planned.

This evaluation has shown the significant role of parents in their children's education and the need for education policy to encompass parental participation. Nonetheless, in 2019, a year after the completion of Neary Rattanak IV's implementation, Tuy's (2019) study on gender discrimination in Cambodia's education system found that no specific parental education program had been conducted in response to the objective of promoting positive parental views toward education. Some parents who lived in rural areas still did not care about their children's education (Tuy, 2019). In its Education Strategic Plan 2019-2023, MoEYS (2019a) also stated that Cambodia urgently needs to increase parental education events and programs by working with public education institutions to teach parents the importance of education. Given this result, it could be seen that the education events for parents that were planned by the education strategies in Neary Rattanak IV should have been improved and monitored (MoEYS, 2019a).

Limited financial support and commitment of the Cambodian government and donors

In So et al.'s (2013) study, financial support was mentioned to be a critical issue for the Cambodian government in reducing gender inequality. As a low-income country, Cambodia has a limited national budget, and its gender-related activities and policies rely largely on its two biggest development partners: ADB and the World Bank. However, in 2016, the World Bank officially revised the status of Cambodia's economy, moving Cambodia from a low-income to a lower-middle-income country. Economists expected that the reclassification of the economic status would lead to a drop in foreign funds and aid for Cambodia's economic and social development in subsequent years (McGrath & Hor, 2016). While the shift could be a good sign of Cambodia's economic growth, the country also has to be more financially independent in implementing social policies.

ADB is one of the developing partners that continues to demonstrate a commitment to achieving a prosperous, resilient, inclusive, and sustainable Cambodia. Under its 2019-2023 country partnership strategy, ADB will provide \$1.45 billion to support Cambodia's development. However, the amount will not be solely given in the form of grants; the support will come as loans and technical assistance and will prioritize areas such as agriculture, natural resources management, and renewable energy (ADB, 2020).

Inadequate human resources

Inadequate human resources are not a problem in some sectors, such as administration and the environment. However, the lack of teachers in rural Cambodia is regarded as a potential issue for education-gender policies. A recent study from Ravet and Mitka (2021) showed that there were not enough teachers, especially female teachers, in Cambodia's rural primary schools; consequently, there were too many students in each classroom, which affected the quality of teaching and learning. Moreover, it was found that training was required to build up teachers' knowledge and teaching skills. The lack of teachers and limited in-service teacher training are linked with the shortage of financial support from the government. Teachers living and teaching in isolated rural areas need more technical support and financial incentives to encourage them and improve their quality of life and teaching. The current shortage of female teachers in primary education indicates gender inequality in the education sector, which also could be a demotivating factor for girls to pursue their education.

Existing social problems

This study has identified Cambodia's existing social issues as an obstacle to implementing the gender and education policy. Some of those problems, such as cultural norms, gender discrimination in the workplace, and safety issues, are perceived to either make it difficult to implement the gender policy or lower the effectiveness of the policy outcomes. Despite the policy effort to reduce gender inequality in education, the older generation still holds the mindset that it is not necessary for women to attend school or receive higher education. This belief leads to the expectation that daughters are to take care of the children and perform housework. Although some modern families do not forbid their

daughters to go to school, they still express concerns about employment discrimination and safety issues. Among these social problems, women and girls' safety has been discussed by many local and international organizations whose work focuses on protecting women's rights. In 2018, in a joint report, ActionAid with other organizations mentioned safety issues as a potential obstacle for Cambodian girls to obtain an education. This issue is also associated with other problems such as discrimination against students with disabilities, the distinction between punishment and violence in the classroom, and bullying (ActionAid Cambodia, 2018). These issues may have been overlooked by the Neary Rattanak IV education strategies, which have in turn affected the effectiveness of the policy implementation.

Women's limited capacity and skills

As mentioned above, one of the remaining challenges for Neary Rattanak IV's education of women and girls strategies is the lack of skilled teachers in primary school education. Thus, MoEYS should initiate more professional training for primary school teachers in remote areas. In addition to the training, more social and professional events should also be created for teachers, especially female teachers, to discuss and exchange their experiences and skills. This type of event is believed to be useful for female teachers to share information and build a network and support system for their profession. Given the crucial role of international development partners in Cambodia's education and gender policy implementation, it is strongly recommended that these international institutions introduce projects and funding schemes for events like professional teacher gatherings to provide benefits to teachers in terms of their teaching qualifications and professional well-being.

Suggestions for future research

There is a need for an appropriate social policy and a well-implemented mechanism to bring a positive social impact. This study only covers the analysis of the implementation of Neary Rattanak IV education strategies to determine how well the policy was implemented. Hence, the findings of this study could not determine the impact on specific areas that the strategies had influenced. Therefore, it is suggested that further research should be conducted to see

whether the education strategies in the Neary Rattanak IV policy are appropriate and well-responded to the current educational issues in Cambodia.

Acknowledgments

The author would like to thank the editors of the Cambodian Education Forum, especially Mr. Kimkong Heng, Mr. Koemhong Sol, and Professor Jennifer McMahon, for their editorial support and comments on earlier versions of this article. The author also wishes to thank two anonymous reviewers for their helpful comments.

The author

Molika Heng is Project Support Officer in ASEAN-Australia Counter Trafficking. She obtained her bachelor's degree in Law from the University of Cambodia in 2018 and a master's degree in Public Policy from the University of Auckland under the support of New Zealand's Ministry of Foreign Affairs and Trade (MFAT) Scholarship. Her research interests include gender equality, human rights, and policy implementation analysis, focusing on gender policy and human rights. Currently, she is also an active member of the legal and research analyst team at Future Forum, an independent Cambodia-based public policy think tank.

Email: hengmolika@gmail.com

References

- ActionAid Cambodia. (2018). *Gender and women's rights*. https://www.upr-info.org/sites/default/files/general-document/pdf/final_versions_merged.pdf
- ADB. (2014). *Cambodia: Country partnership strategy (2014-2018)*. <https://www.adb.org/documents/cambodia-country-partnership-strategy-2014-2018>
- ADB. (2015). *ADB support for gender and development: Country portfolio assessment, Cambodia*. <https://www.adb.org/sites/default/files/evaluation-document/181135/files/country-portfolio-assessment-cambodia.pdf>

- ADB. (2016). *Cambodia: Enhancing education quality project*. ADB Independent Evaluation Department. <https://www.adb.org/documents/cambodia-enhancing-education-quality-project>
- ADB. (2020, September 23). *ADB revises Cambodia's 2020 economic forecast upward*. <https://www.adb.org/news/adb-revises-cambodias-2020-economic-forecast-upward>
- Anderson, E., & Grace, K. (2018). From schoolgirls to “virtuous” Khmer women: Interrogating Chbab Srey and gender in Cambodian education policy. *Studies in Social Justice*, 12(2), 215–234. <https://doi.org/10.26522/ssj.v12i2.1626>
- CEIC. (2018). *Cambodia education statistics*. <https://www.ceicdata.com/en/cambodia/education-statistics>
- Farha, L. (2009). Committee on the elimination of discrimination against women: women claiming economic, social and cultural rights – The CEDAW potential. In M. Langford (Ed.), *Social rights jurisprudence: emerging trends in international and comparative law* (pp. 553-568).: Cambridge University Press. <https://doi.org/10.1017/CBO9780511815485.028>
- Hassena, M., & Hospes, O., & de Jonge, B. (2016). Reconstructing policy decision-making in the Ethiopian seed sector: Actors and arenas influencing policymaking process. *Public Policy and Administration Research*, 6(2). 84-95. <http://www.iiste.org/Journals/index.php/PPAR/article/viewFile/28925/29688>
- Heng, K. (2020). New hope for a research culture in Cambodia. *Cambodia Development Center*. <https://cd-center.org/2020/10/23/new-hope-for-a-research-culture-in-cambodia/>
- JICA. (2018). *Gender mainstreaming for women's economic empowerment (PGM-WEE)* [Project completion report]. <https://openjicareport.jica.go.jp/pdf/1000036814.pdf>
- KAPE. (2013). *Enrolment trends in Phnom Penh*. http://www.kapekh.org/files/report_file/47-en.pdf
- Kem, S., Ros, B., Zwiers, F. P. B., & Kem, K. (2019). *The empowerment of women in Cambodia*. Transparency International Cambodia. http://ticambodia.org/library/wpcontent/files_mf/159644023820191227_EmpowermentofWomeninCambodiaEn.pdf

- Khieng, S., Madhur, S., & Chhem, R. (Eds.). (2015). *Cambodia education 2015: Employment and empowerment*. Cambodia Development Resource Institute. <https://cdri.org.kh/publication/cambodia-education-2015-employment-and-empowerment>
- Kitamura, Y., Edwards Jr, D. B., Williams, J. H., & Sitha, C. (Eds.). (2016). *The political economy of schooling in Cambodia: Issues of quality and equity*. Palgrave Macmillan. <https://doi.org/10.1057/9781137456007>
- LICADHO. (2016). *The situation of women in Cambodia*. <https://www.refworld.org/pdfid/46f146780.pdf>
- Maxwell, T. W., Nget, S., Am, K., Peou, L., & You, S. (2015). Becoming and being academic women in Cambodia: cultural and other understandings. *Cogent Education*, 2(1), 1-12. <https://doi.org/10.1080/2331186X.2015.1042215>
- McGrath, C., & Hor, K. (2016, July 05). *Cambodia's economic status raised to lower-middle income*. The Phnom Penh Post. <https://www.phnompenhpost.com/business/cambodias-economic-status-raised-lower-middle-income>
- Mintrom, M. (2012). *Contemporary policy analysis*. Oxford University Press. <https://global.oup.com/ushe/product/contemporary-policy-analysis-9780199730964>
- MoEYS. (2019a). *Education strategic plan 2019-2023*. <http://www.moeys.gov.kh/index.php/en/policies-and-strategies/3206.html#.Yk78unpBzIU>
- MoEYS. (2019b). *Education congress: The education, youth and sport performance in the academic year 2017-2018 and goals for the academic year 2018-2019*. <http://www.moeys.gov.kh/index.php/en/education-congress-2019/3090-2.html?highlight=WyJjb25ncmVzcyJd#.Yk7-1HozbIV>
- MoWA. (2014a). *Neary Rattanak IV: Five-year strategic plan for gender equality and women's empowerment*. https://www.kh.undp.org/content/dam/cambodia/docs/DemoGov/NearyRattanak4/Cambodian%20Gender%20Strategic%20Plan%20-%20Neary%20Rattanak%204_Eng.pdf
- MoWA. (2014b). *Leading the way – Executive summary: Cambodia gender assessment* [Government Report]. https://www.kh.undp.org/content/dam/cambodia/docs/DemoGov/NearyRattanak4/Neary%20Rattanak%204%20-%20Summary_Eng.pdf

- MoWA. (2014c). *Rights – Vulnerable groups of women and girls: Cambodia gender assessment* [Policy brief 9].
https://www1.undp.org/content/dam/cambodia/docs/DemoGov/NearyRattanak4/Neary%20Rattanak%204%20-%20Vulnerable%20Groups%20of%20Women%20and%20Girls_Eng.pdf
- MoWA. (2014d). *Gender mainstreaming – Institutional, partnership, and policy context: Cambodia gender assessment* [Policy brief 1].
https://www.kh.undp.org/content/dam/cambodia/docs/DemoGov/NearyRattanak4/Neary%20Rattanak%204%20-%20PB%20Gender%20Mainstreaming_Eng.pdf
- MoWA. (2014e). *Attitudes – Gender relations and attitudes: Cambodia gender assessment* [Policy brief 2].
<https://www.undp.org/content/dam/cambodia/docs/DemoGov/NearyRattanak4/Neary%20Rattanak%204%20-%20PB%20Gender%20Relations%20and%20Attitudes%20Eng.pdf>
- MoWA. (2019). *Gender report*. <https://www.unwomen.org/en/csw/csw64-2020/-/media/headquarters/attachments/sections/csw/64/national-reviews/cambodia.pdf>
- MoWA. (2020). *Neary Rattanak V: Five-year strategic plan to promote gender mainstreaming and women's empowerment 2019-2023*.
<https://www.mowa.gov.kh/wp-content/uploads/2021/02/Neary-Rattanak-V-final-Eng.pdf>
- Ngeth, C. S. (2018). *Gender equality in access to formal secondary education in Cambodia*. Parliamentary Institute of Cambodia.
https://pcasia.org/pic/wp-content/uploads/simple-file-list/20190202-Gender-Equality-in-Access-to-Formal-Secondary-Education-in-Cambodia_Ngeth-Chuon-Setha.pdf
- Pacheco-Vega, R. (2016, September 8). *Contemporary policy analysis (Mintrom 2012)*. <http://www.raulpacheco.org/2016/09/contemporary-policy-analysis-mintrom-2012/>
- Pintér, L., Swanson, D., & Barr, J. E. (2006). *Use of indicators in policy analysis. Annotated Training Module prepared for the World Bank Institute*. International Institute for Sustainable Development.
https://www.iisd.org/system/files/publications/measure_use_indicators.pdf
- Ravet, J., & Mtika, P. (2021). Educational inclusion in resource-constrained contexts: A study of rural primary schools in Cambodia. *International*

- Journal of Inclusive Education*, 1–22.
<https://doi.org/10.1080/13603116.2021.1916104>
- Roolvink, L. (2018, October 30). *Cambodia invests in the early years to build a strong foundation for learning*. Global Partnership for Education.
<https://www.globalpartnership.org/blog/cambodia-invests-early-years-build-strong-foundation-learning>
- RGC. (2016). *Cambodia guideline for equity focused and gender responsive evaluation (EFGRE) of policies and programme*. <https://gpffe.org/wp-content/uploads/2019/06/Cambodia-Equity-Focused-and-Gender-Responsive-Evaluation-Guidelines-2016-1.pdf>
- So, S., Kim, S., & Doung, V. (2013). *Exploring the implementation of policies to address violence against women in Cambodia*. Partners for Prevention.
https://www.partners4prevention.org/sites/default/files/resources/p4p_working_paper_vaw_policies_cambodia.pdf
- Tuy, S. (2019). Discrimination against women in accessing higher education in Cambodia. *Journal of Southeast Asian Human Rights*, 3(1), 101–123.
<https://doi.org/10.19184/jseahr.v3i1.8402>
- United Nations. (2020). *Sustainable development goal 4 (SDG 4)*.
<https://sdg4education2030.org/the-goal>
- UNESCO. (2015). *Culture for development indicators: Cambodia's analytical brief*.
https://en.unesco.org/creativity/sites/creativity/files/cdis_analytical_brief_cambodia.pdf
- USAID. (2018). *Cambodia situational analysis of the education of children with disabilities in Cambodia report*. https://ierc-publicfiles.s3.amazonaws.com/public/resources/ACR-Cambodia_Final%20Cambodia%20Disability%20Situation%20Analysis%20Report.pdf
- World Bank. (2018, December 7). *Cambodia and World Bank join forces to improve higher education and connectivity*.
<https://www.worldbank.org/en/news/press-release/2018/07/12/cambodia-and-world-bank-join-forces-to-improve-higher-education-and-connectivity>
- World Bank. (2020). *The World Bank in Cambodia*.
<https://www.worldbank.org/en/country/cambodia/overview>

Challenges of English language learning and teaching in Cambodia: A case study of Kith Meng Brasat High School

Sereyrath Em

University of Szeged
Szeged, Hungary

Abstract

English has been included in school curricula in many countries, but the challenges of learning and teaching English remain. This study aims to find the challenges of learning and teaching English and solutions to solve the challenges in secondary education in Cambodia. An explanatory sequential mixed-methods design was employed. A total of 250 students (52.40% were females) participated in a survey. The students reported that teachers' qualities, study programs, learning and teaching materials, classroom activities, class size, and students' self-learning attitude were the main problems in learning English. A school principal, a deputy principal, and three teachers of English who were interviewed expressed similar concerns regarding the teaching and learning of English. They requested the Ministry of Education, Youth and Sport to provide them with school infrastructure, learning and teaching resources, and extra in-service teacher training workshops. This study recommends that future research with a larger sample size be conducted at other educational institutions across the country.

Keywords: English language learning and teaching; classroom activities; teaching techniques; teacher's qualities; challenges

ARTICLE HISTORY

Received 9 March 2022

Accepted 30 June 2022

Introduction

English was introduced into Cambodia during the Khmer Republic or Lon Nol regime between 1970 and 1975, and at that time it was also included in the curriculum (Neau, 2003). Then it was forgotten at the start of the Khmer Rouge or Pol Pot regime between 1975 and 1979 (Neau, 2003). The Khmer Rouge regime collapsed in 1979, but English language teaching and learning were not encouraged immediately. Igawa (2008) noted that due to the influences of communism, the teaching and learning of English and French were forbidden. Those who learned and taught English or French were considered illegal and were arrested. During this period, the learning of Russian and Vietnamese was encouraged instead.

Neau (2003) and Moore and Bounchan (2010) noted that English reappeared in the curriculum in 1989, and it has been there until today. Currently, English has been included in the Cambodian curriculum from Grade 4 (MoEYS, 2015). There was an intention to include English in the curriculum from pre-school education levels (MoEYS, 2015). Although English has been included in the Cambodian curriculum for more than 30 years, the challenges of English learning and teaching are still a major problem for teachers of the English subject and Cambodian students, especially those who live in the countryside. The English language plays an important role in people's lives because it allows them to communicate not only with their friends and family members but with most people worldwide (Kim, 2020). Besides, it is the world's most widely used language for studying at all learning levels. Students benefit from learning English because it broadens their horizons, develops their emotional abilities, and improves their quality of life by giving them career opportunities. English is even more special when students pursue their studies at a higher education level in their own countries or abroad. At this level, students need to read a lot of documents in English to complete assignments and other school work, and if they are not good at English, they might not succeed in their studies (Ilyosovna, 2020; Rao, 2019a, 2019b). In addition, when students, teachers, or authors search for different sources of documents on the internet, most of those sources are in English (Ilyosovna, 2020).

Moreover, because English is the primary means of communication across nations, its usage as an international or a global language is increasing with

time, and most nations in the world need this language for different reasons (Ilyosovna, 2020; McKay, 2018; Rao, 2019b). English is also commonly used in literature and media; most authors write in English because the great majority of readers only know English rather than any other languages (McKay, 2018; Rao, 2019b). Furthermore, English is very important when writing articles for publication. If you write your articles in your native language rather than English, your work will only appeal to a small group of readers, most of whom will be your own nationals. In contrast, if you write your articles in English, your work can attract a global audience (Heng et al., 2021).

Even though English has progressed from its origins as a mother tongue to a second language, a foreign language, and a global language, and it has transformed into world Englishes, the challenges in learning and teaching it remain serious for many students in English as a foreign language (EFL) contexts such as Cambodia.

To examine the challenges, Moore and Bounchan (2010) conducted a study at the Institute of Foreign Languages, Royal University of Phnom Penh. They found four challenges to learning and teaching English. The first was the development of an indigenous form of English in Cambodia. That means English was preferred by small groups of people. The second issue was the challenges of teaching standard English or English varieties because it had become an international or a global language. The third challenge was the attitude of the people in society towards those who spoke or wrote in English. Many Cambodian people view those who speak or write in English as arrogant. Finally, work opportunities were not frequently provided to those who knew English. Many Cambodian people valued those who know Chinese more than those who know English because job opportunities for those who know Chinese were much more accessible. Those who know Chinese could work in the garment factories as interpreters and receive a decent salary.

Another study conducted semi-structured interviews with 24 participants to find out the challenges faced by teachers and students in Cambodian tertiary institutions showed some challenges. These challenges included a lack of proper English for Specific Purpose (ESP) training for instructors, a lack of teacher motivation, limited English proficiency among students, and challenges in developing teaching and learning materials (Petraki & Khat, 2020). Neau

(2003) also noted that the lack of teaching and learning materials for Cambodian teachers of English was a key challenge to teaching and learning English in Cambodia.

Many of the difficulties that Cambodian students face are related to the resources that schools have. The absence of resources such as course books, tape recorders, and computers significantly influences learners' interest in language learning and teaching. Teachers' low wages may have an impact on their students' learning experiences, too. Due to the low wages, teachers may lack the excitement and good attitudes needed in the classroom to create a pleasant learning environment. As a result, students may become bored with their teachers and lack excitement in the classroom, resulting in issues with morale and rapport in the classroom (Pachina, 2020).

This article reports findings from a study that aimed to explore the challenges of learning and teaching English at a secondary school in Cambodia. The study also aimed to find solutions to the problems through discussions with a school principal, a deputy principal, and three teachers of English. In what follows, the article presents the research methodology, findings, discussion, and conclusion and recommendations.

Methodology

Research design

This article is based on a study conducted by the author to fulfill the requirement of a master's degree in educational administration, which was originally written in Khmer (see Em, 2019). The study employed a mixed-methods design.

Mixed-methods design, a combination of quantitative and qualitative methods, was used in this study because the author and his advisors agreed that both a survey and discussions with key informants were essential to understand the issues under study. Creswell and Clark (2017) noted that the basic premise of the mixed methods design is that combining quantitative and qualitative approaches yields a greater grasp of research problems and complicated phenomena than either approach alone.

Setting and participants

The study was conducted at Kith Meng Brasat High School, a public high school located in Krangbroteal village, Doung commune, Bati district, Takeo province, Cambodia. There were only four grades (Grades 7-10) when the study was conducted because the high school was just upgraded from a lower secondary school. The total number of students was around 550, and there were four English subject teachers. To avoid bias in conducting this research, 98 students in Grade 10 were excluded from the study because the author was the subject teacher of English in that grade. Thus, the student participants were selected from Grades 7 to 9. Table 1. provides a summary of the demographic information of the student participants.

Because the study was the requirement to complete a master's degree in education, the author proposed a research proposal and defended it with the committee from the National Institute of Education (NIE) and the Ministry of Education, Youth and Sport (MoEYS). After the proposal was successfully defended, MoEYS issued a letter of permission for the author to conduct the study. Having received permission from MoEYS, the author informed all the related participants about the study, especially the target groups, including school principals, subject teachers, and students in Grades 7-9, about the study two weeks before the author met them face-to-face.

The study employed a purposive sampling technique for quantitative data, allowing the author to choose the participants with whom the author was sure he could conduct the study to meet the study objectives. Before the data collection proceeded, the author met the school principals and teachers of English to inform them about the objectives and the detailed information regarding the study. Then the author asked for permission from the school principals to meet the target students in order to explain the data collection process to them.

Data collection

The quantitative data collection process took three days to be completed by the students in Grades 7-9. Before every data collection process took place, the author reminded the student participants that completing the questionnaire

(see Appendix) was based on a voluntary basis, not a compulsory one. The author also informed the student participants that their names were excluded from the questionnaire, and their data would be kept confidential and used only for the study. Their data would also be destroyed five years after the completion of the study. Moreover, the students were also informed that they could exclude themselves from the study at any time if they had any concerns, including privacy concerns. Thus, they could withdraw from the study without having to provide any information.

After the quantitative data were analyzed and key problems were found, the author met the school principal, the deputy principal, and three subject teachers of English to confirm the findings and to discuss the solutions to solve the problems through semi-structured interviews (see Table 2. for demographic information about these key informants). The three teachers of English were interviewed in English due to their requests, while the two principals were interviewed in Khmer because they could not speak English. The data obtained from the principals was then translated directly into English by the author. These target groups were also informed about the ethics of the study in the same way as the author informed the student participants.

Data analysis

Quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS) 19. The analysis focused on the Mean (M) and Standard Deviation (SD) of each variable, and all the variables were computed and analyzed by focusing on M and SD. Qualitative data were analyzed based on a content analysis suggested by Graneheim and Lundman (2004). Content analysis is a research method for determining the existence of specific words, topics, or concepts in qualitative data (i.e., texts). Using content analysis, researchers can measure and evaluate the existence, meanings, and correlations of certain words, themes, or concepts. They can infer the meanings of the texts, the writer(s), the audience, and even the society and historical period surrounding the work (Graneheim & Lundman, 2004). Findings from the qualitative data analysis are presented after the results of the survey data.

Results

Results from the survey

Table 1. *Demographics of the student participants (N=250)*

Demographic		Value	N	Frequency (%)
Gender		Male	119	47.60
		Female	131	52.40
	Age	11-15	250	100
Grades	Grade 7	Male	42	16.80
		Female	48	19.20
	Grade 8	Male	38	15.20
		Female	42	16.80
	Grade 9	Male	39	15.60
		Female	41	16.40

As shown in Table 1, there were 119 (47.60%) male students and 131 (52.40%) female students who completed the survey. All the participants were 11-15 years old and from three different grades. There were 90 students (48 females) from Grade 7, 80 students (42 females) from Grade 8, and 80 students (41 females) from Grade 9. The total number of students who participated in the study was 250 (a 100% response rate).

Students' perceptions based on each variable and the sum of all variables

As shown in Table 2, the mean scores for variables 1, 2, and 4 were low, indicating teachers' qualities, study programs, and classroom activities were not good. In particular, variable 2 (study programs) had the lowest mean score, suggesting the existing English study program was not acceptable at all. Variables 3, 5, and 6 had moderate mean scores, meaning that learning and teaching materials, class size, and students' self-learning attitude were also parts of the challenges of learning and teaching English in the studied context. Overall, as the mean score for all variables was low ($M = 2.39$, $SD = .40$), it is clear that the challenges of learning and teaching English in the studied context

were considerable, requiring efforts from all stakeholders to seek solutions to address them.

Table 2. *Students' perceptions based on each variable and the sum of all variables (N=250)*

No.	Variables	N	Mean	SD	Minimum	Maximum
1.	Teachers' qualities	250	1.90	0.46	1.00	3.67
2.	Study programs	250	1.60	0.12	1.50	1.75
3.	Learning and teaching materials	250	2.68	0.35	1.90	3.60
4.	Classroom activities	250	2.34	0.46	1.50	3.67
5.	Class size	250	3.22	0.45	2.00	4.50
6.	Students' self-learning attitude	250	2.62	0.56	1.00	3.75
7.	Sum of all variables	250	2.39	0.40	1.48	3.49

Note: Mean score of 1.00-1.80 = Lowest, 1.81-2.60 = Low, 2.61-3.40 = Moderate, 3.41-4.20 = High, and 4.21-5.00 = Highest

Findings from the interviews

Table 3. *Demographics of the school principals and teacher participants*

Participant code	Gender	Degree	Position	Experience	Discipline
P1	M	Bachelor	Principal	25 years	Biology
P2	M	Bachelor	Deputy principal	21 years	Geography
P3	M	Bachelor	English teacher (Grade 9)	15 years	TEFL
P4	M	Bachelor	English teacher (Grade 8)	14 years	TESOL
P5	M	Pursuing Bachelor	English teacher (Grade 7)	11 years	TESOL

A purposive sampling strategy was utilized to obtain qualitative data for the study (Patton, 2015), considering factors such as gender, education degree, position, and work experience. A total of five participants (all were males) were asked to participate in semi-structured interviews. Overall, these participants had between 11 to 25 years of work experience, and their specializations were Biology, Geography, TEFL (Teaching English as a Foreign Language), and TESOL (Teaching English to Speakers of Other Languages). These participants held positions as a school principal, a deputy principal, and teachers of English. Four of them held bachelor's degrees, and the other was pursuing a bachelor's degree. The participants' demographics are provided in Table 3.

EFL Teachers' views concerning the problems of learning and teaching English

The analysis revealed many concerns regarding learning and teaching English. The problems were the number of students in each class. The student center approach did not work because there were more than 40 students in each class, making group work and pair work come to a standstill. As a result, a lecture-based approach was used instead. The lack of learning and teaching materials was another major problem. Three EFL teachers for lower secondary shared only one audio player. The audio player was also sometimes used by upper-secondary teachers. There was also a limit to the number of English hours per week set by MoEYS. For lower secondary and Grade 10, four hours are allowed for English subjects, while there are only two hours per week for Grades 11 and 12. Besides, the core English textbooks, the *English For Cambodia (EFC)* series, were out of date, causing great concerns about quality. The textbooks contained some old and out-of-date vocabulary and information, causing challenges for the teacher and students alike. After learning, the students could not apply what they had learned in their real lives. The following quotes illustrate this point:

Yes, there are many concerns with teaching English... I cannot teach them well because there are too many students in the class... and yes, the study hour for English is not enough. (P5, male, teacher of English)

Sure... sometimes I don't see the audio player in the director's office, so I don't play the audio for the students... Yes, there are too many students, so I cannot teach them using many activities... Sometimes I only read and translate for them. (P4, male, teacher of English)

A big class size just makes me dizzy. Sometimes I get lost... I cannot beat the students. They talk too much. Some of them sometimes don't know what I say. Besides, the textbook is very old. Most of my students always complain that what they learn in the class cannot be used in their society. (P3, male, teacher of English)

Teachers' suggestions

At the end of the interviews, all of the informants suggested that the number of students in the classroom should be reduced, English textbooks should be updated, teaching hours should be increased to 5-6 hours per week, and the school should be equipped with more teaching and learning resources. Besides, all of the teachers said that MoEYS should organize physical workshops or online training platforms on English language learning and teaching that would provide more opportunities for rural teachers to attend. As the three teachers put it:

If possible, the number of students should be around 25-30. English textbooks should be updated regularly. (P5, male, teacher of English)

I think 5 or 6 hours a week for English is much better than 4 hours. And it is even better if there is an English library and a listening lab. (P4, male, teacher of English)

I think all the teachers and I should be assigned to join the workshop on English language teaching methodology more often... MoEYS should think about that...they can do it in class or online ... it is better than not. (P3, male, teacher of English)

School principals' views concerning the problems of teaching and learning English

After the interviews with the three English teachers, the author went on to dig deeper into the challenges of learning and teaching English by requesting to meet the school principal and the deputy principal for the interviews. The request was agreed upon, the interviews were conducted successfully, and similar concerns were found, as shown in the following quotes.

There were many challenges that usually happen in our school. There were many students. Thus, we need to squeeze the students. Some

classrooms. there were 45-50 students... We don't have enough buildings. We need to borrow one building from the primary school nearby. (P1, male, school principal)

We don't have a listening lab in our school. We don't have an English library... We don't have enough English textbooks. Some students need to share textbooks when they learn English. (P2, male, deputy principal).

I think my teachers are qualified. I think they can teach the students well if the situation is good. They told me that the situation is not good because there are too many students in the class... if the situation goes better, all my teachers will work better than now. (P1, male, school principal)

The students cannot learn well because they are very noisy in the class. They (the students) don't have... enough textbooks. We don't have an English library and we don't have a listening room either. (P2, male, deputy principal)

After interviewing both principals, the author found that the three teachers of English participating in this study were qualified to teach the English subject, given their educational backgrounds. It was also found that their school lacked buildings, so a number of students were assigned to study in one classroom. Both principals stated that there were around 45-50 students in each classroom. The principals were told by the subject teachers of English that teaching a large class was difficult because a lot of classroom activities needed to be practiced in order to prepare the students to acquire the language. A large class size made it difficult for all the teachers who applied a Communicative Language Teaching approach, group work techniques, students' presentations, and so on. Moreover, both principals stated that a lack of English textbooks was another big challenge because the school did not receive enough textbooks based on the students' enrollment rate, so the students were asked to share textbooks with their partners during class sessions. They also added that their school did not have a language lab, so the students could not come for listening activities when needed.

Principals' suggestions

At the end of the interviews, the two principals made an appeal to MoEYS and

all concerned stakeholders. Their suggestions included requesting more buildings, more teaching and learning materials such as a language lab with electronic devices, more textbooks, and other useful resources.

MoEYS should provide us with more buildings and English textbooks for students so that they can depend on their own books, not with friends. (P1, male, school principal)

MoEYS should provide some teaching materials to our school. We are not qualified to build a listening lab. We don't have skills. We need more English documents. (P2, male, deputy principal)

Discussion

This study found that there were some challenges faced by the teachers and students in teaching and learning English. Key challenges were related to teachers' qualities, study programs, learning and teaching materials, classroom activities, class size, and students' self-learning attitude. These variables were considered challenges that prevented the students from learning and teachers from teaching English successfully. Through the interviews with the teachers, it was found that those problems were happening in the studied context. School principals also added that the lack of buildings, textbooks, and a language lab created problems for the process of English language learning and teaching in the school.

The findings of the present study corroborate those of Neau (2003) and Petraki and Khat (2020), who found that the lack of teaching and learning materials hindered the effectiveness of language teaching. Petraki and Khat (2020), for example, stated that many schools did not provide teachers with a variety of teaching and learning materials, and the teachers themselves did not produce the materials either.

The current study's findings also corroborate those of Pachina (2020), who stated that the lack of modern resources such as course books, tape recorders, and computers has a considerable impact on learners' enthusiasm for language learning, and teachers' low motivation may also have an influence on the learning experiences of their students.

Based on the results of the survey, teachers' qualities, including teaching techniques and teaching performance, were also found as the key challenges to learning and teaching English. Through the interviews, similar concerns were confirmed. Very often, a teacher of English only stood in one place (mostly next to his desk) to read and translate the texts or conversations into Khmer for his/her students. These findings corroborate those of Houn and Em (2022), who found that Cambodian teachers of English usually used the old instructional methods or the Grammar Translation Method to teach English. They usually spoke in Khmer and rarely used English to communicate with students.

Conclusion and recommendations

This study has found some challenges faced by Cambodian secondary school students and teachers in learning and teaching the English language. As the survey results showed, teachers' qualities, study programs, learning and teaching materials, classroom activities, class size, and students' self-learning attitude were the key challenges in learning English. The interview data also revealed similar challenges faced by teachers in teaching English to their students.

In this context, the teachers could not perform their teaching well because there were too many students in the class, and there was a lack of learning and teaching resources. Moreover, textbooks were not up to date, and the study hours for the English subject were not enough. Due to a large number of students in the class, classroom activities did not work well. As a result, the students sometimes ignored their teacher's teaching and did not do their homework properly.

This study has some recommendations for the Ministry of Education, Youth and Sport and relevant stakeholders to work together to improve the situation of English language teaching in Cambodian schools. The recommendations are related to supporting teachers to pursue their professional development, providing enough learning and teaching materials, and updating the curriculum.

Teachers' professional development is essential in equipping them with new teaching techniques. Many teachers have extensive experience teaching English

in a variety of settings. Thus, if they have the chance to meet, they can exchange their experiences (Zein & Haing, 2017). Given the importance of teachers' continuing professional development, it is best if the teachers have a chance to exchange their teaching experiences (Em et al., 2021). Thus, MoEYS should allow and encourage all teachers to attend seminars and training workshops so that they can support one another and exchange ideas about teaching English. Teaching and learning materials help the process of learning and teaching work smoothly (Vong & Kaewurai, 2017). Teachers need learning and teaching materials to teach their students the lessons properly since they allow them to better understand and appreciate the concepts, themes, and subject matter. Students can also experience tangible learning outcomes with the use of learning and teaching resources. As a result, teachers can use the materials to assist their students to learn quicker, retain memorizations longer, and get more correct information, which help to increase knowledge, curiosity, creativity, and thinking skills. Therefore, MoEYS and concerned stakeholders must find ways to offer sufficient learning and teaching resources for all schools in Cambodia.

In the context of this study, the *English For Cambodia* (EFC) textbook series published between 1997 and 2002 were still used, and even worse, the students did not have enough textbooks for their learning. Outdated textbooks make the students feel discouraged because what they have learned cannot be applied in their real society. Therefore, a new and updated textbook is urgently needed. The new and updated textbook should include easily accessible extra materials such as audio or videos that teachers and students can download from the internet. Besides, the updated textbook should also include some aspects of intercultural communication because the world has become a global village, and English is a global lingua franca. Along with updating the textbook, MoEYS and education stakeholders need to provide enough textbooks for all public schools in Cambodia.

Finally, this study has some suggestions for future research. In particular, future research should be conducted with a large sample size and involve other grade levels. Studies examining the effectiveness of learning and teaching English in the Cambodian context are highly recommended. Moreover, because English has become an international language, research on English as a global

language by examining the actual implementation in Cambodian classrooms is desirable.

Acknowledgments

The author would like to thank Mr. Kimkong Heng, Editor-in-Chief of the Cambodian Education Forum, for his feedback and editorial support and two anonymous reviewers for their helpful comments on an earlier version of this article. The author would also like to thank Cambodia International Education Support Foundation (CIESF) for providing him with a master's degree scholarship to study at the National Institute of Education (NIE). The author is also grateful to Dr. Vira Neau and Mr. Lina Lorn for their supervision during the conduct of the master's thesis. The author also wishes to thank Mr. Nel Nun for reviewing this article before submission.

The author

Sereyrath Em is a government teacher of English with a higher education degree working at Kith Meng Brasat High School, a visiting lecturer at the Chea Sim University of Kamchaymear (CSUK), and an Associate Editor at the Cambodian Education Forum (CEF). His research interests include English language teaching, educational leadership, learning and teaching motivation, and learning and teaching challenges. Currently, he is a PhD student in Educational Sciences at the University of Szeged, Hungary.

Email: sereyrathem.edu@gmail.com

References

- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research* (2nd ed). Sage Publications.
<https://www.amazon.com/Designing-Conducting-Mixed-Methods-Research/dp/1412975174>
- Em, S. (2019). *ការរៀន និងបង្រៀនមុខវិជ្ជាភាសាអង់គ្លេសនៅកម្រិតមធ្យមសិក្សាបឋមភូមិ ក្នុងខេត្តតាកែវ៖ ករណីសិក្សា វិទ្យាល័យ គិត ម៉ង់ ប្រាសាទ* (Learning and teaching English at lower-secondary school levels in Take province: A case study of Kith Meng Brasat High School). [Unpublished Master's

- Thesis, National Institute of Education, Phnom Penh, Cambodia].
<http://dx.doi.org/10.13140/RG.2.2.15969.43360>
- Em, S., Nun, N., & Phann, S. (2021). Qualities, personal characteristics, and responsibilities of qualified teachers in the 21st century. *Cambodian Journal of Educational Research*, 1(2), 49-63.
<https://cefcambodia.com/2021/11/18/1191/>
- Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, 24(2), 105-112.
<https://doi.org/10.1016/j.nedt.2003.10.001>
- Heng, K., Sol, K., Kaing, S., & Ros, V. (2021, April 17). *Introduction: Engaging and supporting Cambodian youth to write for publication in English*. Cambodian Education Forum.
<https://cefcambodia.com/2021/04/17/introduction-engaging-and-supporting-cambodian-youth-to-write-for-publication-in-english/>
- Houn, T., & Em, S. (2022). Common factors affecting grade-12-students' speaking fluency: A survey of Cambodian high school students. *Jurnal As-Salam*, 6(1), 11-24. <https://www.jurnal-assalam.org/index.php/JAS/article/view/360>
- Ilyosovna, N. A. (2020). The importance of English language. *International Journal on Orange Technologies*, 2(1), 22-24.
<https://www.neliti.com/publications/333378/the-importance-of-english-language>
- Igawa, K. (2008). English language and its education in Cambodia, a country in transition. *Shitennoji University Bulletin*, 46(1), 343-369.
<https://www.shitennoji.ac.jp/ibu/images/toshokan/kiyo46-20.pdf>
- Kim, D. (2020). Learning language, learning culture: Teaching language to the whole student. *ECNU Review of Education*, 3(3), 519-541.
<https://doi.org/10.1177%2F2096531120936693>
- McKay, S. L. (2018). English as an international language: What it is and what it means for pedagogy. *RELC Journal*, 49(1), 9-23.
<https://journals.sagepub.com/doi/abs/10.1177/0033688217738817>
- Moore, S. H., & Bounchan, S. (2010). English in Cambodia: Changes and challenges. *World Englishes*, 29(1), 114-126.
<https://researchers.mq.edu.au/en/publications/english-in-cambodia-changes-and-challenges>

- MoEYS. (2015). *Curriculum framework of general education and technical education*.
<http://www.moeys.gov.kh/en/dge/2328.html#.YkbU6yhBw2w>
- Neau, V. (2003). The teaching of foreign languages in Cambodia: A historical perspective. *Language, Culture and Curriculum*, 16(3), 253-268.
<https://www.tandfonline.com/doi/abs/10.1080/07908310308666673>
- Pachina, E. (2020, July 7). *Typical challenges faced by English students from Cambodia*. International TEFL and TESOL Training.
<https://www.teflcourse.net/blog/typical-challenges-faced-by-english-students-from-cambodia-ittt-tefl-blog/#:~:text=The%20lack%20of%20materials,learner's%20interest%20in%20the%20language.>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice*. Sage Publications.
- Rao, P. S. (2019a). The importance of English in the modern era. *Asian Journal of Multidimensional Research*, 8(1), 7-19.
<https://www.indianjournals.com/ijor.aspx?target=ijor:ajmr&volume=8&issue=1&article=001>
- Rao, P. S. (2019b). The role of English as a global language. *Research Journal of English*, 4(1), 65-79.
[https://www.rjoe.org.in/Files/vol4issue1/new/OK%20RJOE-Srinu%20sir\(65-79\)%20rv.pdf](https://www.rjoe.org.in/Files/vol4issue1/new/OK%20RJOE-Srinu%20sir(65-79)%20rv.pdf)
- Vong, S. A., & Kaewurai, W. (2017). Instructional model development to enhance critical thinking and critical thinking teaching ability of trainee students at regional teaching training center in Takeo province, Cambodia. *Kasetsart Journal of Social Sciences*, 38(1), 88-95.
<https://doi.org/10.1016/j.kjss.2016.05.002>
- Zein, S., & Haing, S. (2017). Improving the quality of English language teacher educators: A case study at a Cambodian university. *Asian Englishes*, 19(3), 228-241.
<https://doi.org/10.1080/13488678.2017.1389064>

Appendix

A Master's Degree Questionnaire for Data Collection

Dear student participants,

This is a study on the challenges of learning and teaching English at your school level. The study aims to examine the challenges faced by Cambodian students and teachers in learning and teaching English at lower secondary education levels, and it also aims to find solutions to solve the problems by interviewing school principals and teachers of English. The researcher values your input into the study. The questionnaire contains seven parts, as shown below. It will take you only around 20 minutes to pick up your choices. Please be assured that your responses are the strictest confidence and will be used in this study only. With respect to your privacy, you are not required to fill in your name. Besides, your information will be destroyed 5 years after the study.

Please be aware that your honesty is the only best way that your school principals and your teachers of English can discuss with the researcher to find the solutions to solve the existing problems. Thus, please think critically before choosing each choice.

Part I. Demographic information

1. Please choose your gender

1. ☐ Male 2. ☐ Female

2. Please choose your age range

1. ☐ 11-15 2. ☐ 16-20 3. ☐ 21-over

3. Please choose your grade

1. ☐ Grade 7 2. ☐ Grade 8 3. ☐ Grade 9

Please note that from part II, you are required to choose the most appropriate numbers by ticking under only one choice: 1 2 3 4 or 5. The rating scales are 1. Strongly disagree, 2. Disagree, 3. Not decided, 4. Agree, and 5. Strongly agree.

Part II. Teacher' qualities	1	2	3	4	5
1. My teacher's knowledge is very good.					

2. My teacher's teaching technique is very good.					
3. My teacher's teaching performance is very good.					
4. My teacher always encourages me to learn.					
Part III. Study program	1	2	3	4	5
1. My textbook is in line with my existing knowledge.					
2. My textbook is very interesting.					
3. My existing English hour is enough in a week.					
4. I don't need additional hours for English sessions in a week.					
Part IV. Learning and teaching materials	1	2	3	4	5
1. Teacher uses a textbook all the time is the best way to teach.					
2. My teacher always plays audio records for students to listen to.					
3. My teacher always takes me to the listening lab.					
4. My teacher always takes me to the English library.					
Part V. Classroom activities	1	2	3	4	5
1. Individual work is very good.					
2. Whole class work is not very good.					
3. Pair work is not very good.					
4. Group work is not very good.					
Part VI. Class size	1	2	3	4	5
1. A class with too many students is very good.					
2. A class with too many students does not affect my study.					
3. A class with a lot of students makes me happy.					
4. I like being noisy because of the large class size.					
Part VII. Students' self-learning attitudes	1	2	3	4	5
1. I am very punctual for class.					
2. I always pay attention to whatever my teacher explains.					
3. I always participate in the class activities my teacher assigns.					
4. I always do my homework.					

Thank you for your cooperation!

Making learning styles and destinations visible: Using dashboards to support secondary education

Nathan Polley

*Logos International School
Phnom Penh, Cambodia*

Russell Mills

*Hope International School
Phnom Penh, Cambodia*

Abstract

The increased accessibility of data analytic tools provides opportunities to improve teaching and learning and career counselling in secondary education. This preliminary study explored the design, development, and deployment of an initiative to use dashboards to provide teachers and career counsellors with tools in the form of dashboards to improve teaching, learning, and guidance. The study applied an action research methodology that drew from the Unified Theory of Acceptance and Use of Technology model in two international secondary schools in Cambodia. Though limited in its scope, the study highlights the potential for dashboards to inform teaching and learning and career counselling when integrated with the school teaching and learning philosophy and professional development.

Keywords: Career counselling; learning styles; dashboards; Unified Theory of Acceptance and Use of Technology; secondary education.

ARTICLE HISTORY

Received 29 January 2022

Accepted 17 July 2022

Introduction

One common quote attributed to management guru Peter Drucker is “what gets measured gets managed” (Prusak, 2010). While this statement may reflect many aspects of modern education, it presupposes that data is analysed to inform teaching or management practice. However, our experience as educators suggests that analysis often does not occur or lacks depth. Furthermore, the analysis process may be impacted by confusing or contradicting data. To improve classroom management, we believe an important step is to enhance the capability of teachers to analyse data by presenting information visually.

Our study began as a collaborative project between three staff members from two Cambodian international schools to streamline and visualise the career guidance process. Both international K-12 schools were approximately 20 years old, of a similar size (approximately 300 students) and located in Phnom Penh but differed by following either a US or UK curriculum. For both schools, career guidance was important because most students sought international tertiary study in destinations such as the US, UK, Australia, Canada, Singapore, and New Zealand. With each country having different study requirements (Global Information Consultants, n.d.), it was important for career counsellors and teachers to access and integrate this information in their respective roles to meet learner expectations.

In scoping the project, the team identified a potential to improve teaching and learning by capturing and visualising information about students, their interests, and their learning styles in a dashboard. By ‘dashboard,’ we refer to graphical summaries of key information arranged to enable data analysis and decision-making (Brouns et al., 2015). Prominent data analysis software used to create dashboards include Microsoft PowerBI, Google Analytics, Sisense, and Zoho Analytics - to name a few of the software packages now available. Where previously these schools collected information on student learning styles through Learning Support (i.e., school programmes working with students identified as having special learning needs or being gifted and talented), this information was limited to students receiving learning support, was not widely distributed, and could not be easily analysed at an individual or class level. Our team hypothesised that better collection, distribution, and dissemination of this information through dashboards could enable teachers to better cater for cognitive diversity and improve teaching and learning in our classrooms.

Research question and objectives

We identified that a key success factor in the project was the acceptance and use of the dashboards by teachers and career counsellors. To better understand technology adoption, we initiated this concurrent study using action research to analyse results and share findings with staff so lessons could be better integrated into future development stages and other technology projects. The research question we formulated was: What can we glean about user acceptance and adoption of dashboards in our schools that can be used to support future teaching and learning and project development? Our project aims were to:

1. Increase efficiency for learning support and career guidance by process mapping and streamlining related processes,
2. Consolidate data collection about learning styles, learning preferences, and career destinations in one responsive form, and
3. Improve teaching and learning by communicating information to academic staff through dashboards.

We planned the project to occur in four stages. Stage one conceptualised and designed the dashboard, stage two developed dashboards, stage three analysed feedback, and stage four compiled recommendations to guide further development. This article explores the underpinning theories, summaries the study methodology and its findings, and recommendations for further or future projects.

Literature review

The Unified Theory of Acceptance and Use of Technology

Research on user acceptance and adoption of technology has seen a plethora of related models proposed over the past 40 years. Among the most recognised is the Unified Theory of Acceptance and Use of Technology (UTAUT) model – a synthesis of eight earlier psychology, innovation, and information technology models and theories (Venkatesh et al., 2003). Venkatesh et al. (2003) argued that four dimensions influence behavioural acceptance and use – *performance expectancy* (with constructs of perceived usefulness, job fit, extrinsic motivation,

and relative advantage), *effort expectancy* (with constructs of perceived ease of use, complexity, ease of use), *social influence* (with constructs of subjective norms, social factors, and image) and *facilitating conditions* (with constructs of perceived behavioural control, facilitating conditions and compatibility) (see Figure 1). We believed that the synthesis of the earlier model into these four clear dimensions provided a good framework for understanding factors shaping staff acceptance and use of dashboards.

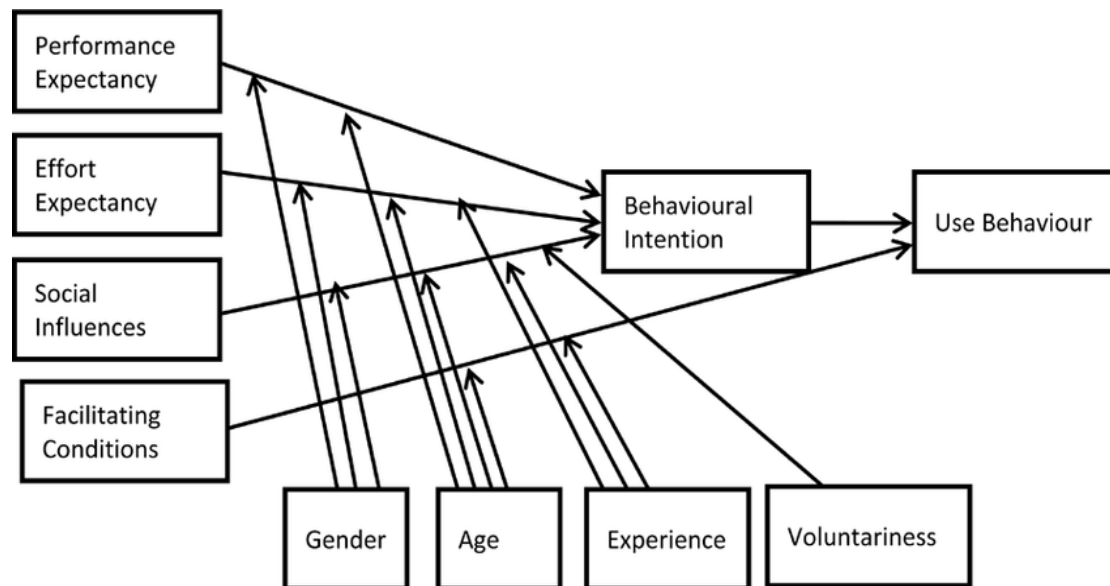


Figure 1: The Unified Theory of Acceptance and Use of Technology
(Venkatesh et al., 2003, p. 447)

Models and theories underpinning the UTAUT model provide insight into how technology is accepted and used. The *Technology Acceptance Model* (TAM) predicts acceptance or rejection of technology based on the perceived usefulness of technology and the perceived ease of use (Granić & Marangunić, 2019). Research by Alharbi and Drew (2014) found that the behaviours of teaching staff in a Saudi university were consistent with the TAM – suggesting the model could be applicable in education contexts. However, a study by Setyohadi et al. (2017) on the adoption of e-Learning in an Indonesian context found that peer influence was also a key factor in user acceptance and of more importance than perceived usefulness. Venkatesh (2003) captured both factors in the UTAUT model and also drew from the *Theory of Reasoned Action* where Sheppard et al. (1988) argued that user feelings (positive or negative) and the feelings of their social network encouraged or hindered technology adoption. While we believed staff individual and collective beliefs might shape

dashboard acceptance and use, we also recognised that staff could lack the experience or skills to use dashboard information in their teaching.

Another important underpinning theory of the UTAUT, the *Theory of PC Utilisation*, argued that acceptance and use were influenced directly by experience and indirectly by job fit, complexity, long-term consequences, affect towards use, social factors, and facilitating conditions (Thompson et al., 1994). The *Social Cognitive Theory* also argued that self-efficacy in using technology was also a significant factor shaping acceptance and use (Compeau & Higgins, 1995). While aspects of these models may still hold true, both models were proposed in the 90's when computer use in secondary school was much lower. In contrast, staff in the schools in our study had extensive computer experience with all teaching at this time online due to COVID-19.

The *Innovation Diffusion Theory* argued technology diffusion occurs when there is a relative advantage in technology over its predecessor, ease of use, an enhancement to personal image or status, visibility within the organisation, compatibility with existing values, needs and past experiences, and demonstrated results (Moore & Benbasat, 1996). It was difficult to validate these constructs in the study as users had no direct precedent, and there was no clear link to how the use of the dashboards would enhance image or visibility.

We suspected other psychological models or theories underpinning the UTAUT model would have less influence on user acceptance and use at this stage in the project. The *Motivational Model* argued acceptance could be linked to extrinsic motivators when there is a belief that desired outcomes are linked to an activity or intrinsic motivators if the user is self-motivated for personal reasons (Vallerand, 1997). Nevertheless, our project had no formal, direct, or clear extrinsic motivators encouraging dashboard use, and dashboards were available to staff on a voluntary basis. The related *Theory of Planned Behaviour* (and also the *Combined Technology Acceptance Model and Theory of Planned Behaviour*) also argued that decision-making is influenced by user intention and perceived behavioural control of a technology (Taylor & Todd, 1995). Given the new and evolving development of the dashboards, it was unclear if these constructs would be a factor at this stage in the project.

Since being proposed, some academics have noted shortcomings in the UTAUT model or proposed further developments. The development includes factoring in online social support (Lin & Anol, 2008) and social networks (Sykes et al., 2009) or considering the influence of mobile technology (Wang & Wang, 2010) - factors not relevant in this study. Bagozzi (2007) noted how 41 variables and at least eight independent variables underpinning the UTAUT model contributed further to confusion in the study of technology adoption, and Van Raaij and Schepers (2008) and Li (2020) suggested the model may be overly complex. To simplify the study, our team focused on exploring the dimensions identified by Venkatesh (2003) through a qualitative study as a preliminary for further research in later project stages.

Use of dashboards within education

Although our project signals progress within our institutions, other studies have also used dashboards to share education analytics. In a UK study by Herodotou et al. (2021), staff who actively used dashboards displaying predictive learning analytics found significantly better performance in students previously identified as being at risk of failing. A similar but more limited Vietnamese university research project proposed how dashboards may achieve this but did not track or report on outcomes (Thanh et al., 2021). Limited research by Darling-Hammond et al. (2014) also suggests the use of dashboards may strengthen college preparation through targeted discussions and interventions - reflecting the potential benefits for student achievement through dashboards.

Research has also explored factors shaping successful dashboard implementation. Bingimlas (2009) found that despite teachers having a strong desire to integrate technology into their lessons, they were hindered by a lack of confidence and competence or had negative attitudes and inherent resistance. Raffaghelli et al. (2022), in a Spanish higher education institute, also found unrealistic expectations of users of Early Warning Systems (EWS) - what we refer to as 'dashboards,' negatively impacted acceptance and use. Similarly, research by Klein et al. (2019) in higher education found that successful adoption by faculty required reliable technological infrastructure and a 'fit' between the dashboard and user needs. Although research in secondary

education is limited, it suggests dashboard adoption and use requires solutions that combine technology and support.

While earlier research found that dashboards helped visualise learning analytics and identified some strategies that shape dashboard adoption and use, there were some research gaps. We found no research exploring dashboard adoption and use by secondary staff in a Cambodian context. Furthermore, it was unclear how the increased use of technology by staff through blended and online learning during COVID-19 (König et al., 2020) impacted staff technology competency and attitudes and how this would impact dashboard adoption and use. Our project considered these factors by creating what we believed to be innovative, useful, and simple-to-use dashboards for teaching and counselling staff with technical support from our team and from a short training demonstration.

Research methodology

Research design

We applied an action research methodology to support practitioner-led professional learning by encouraging feedback and reflection. While we recognised potential tensions in balancing professional outcomes and research (Simonsen, 2009), we believed this approach could be a catalyst for further projects in these schools and help foster a research culture consistent with the research requirements of the Kingdom of Cambodia. Action research is an interactive, collaborative and data-driven enquiry process that seeks to create change by problem-solving and testing potential solutions (Young et al., 2010). Better put, action research is “a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices and the situations in which the practices are carried out” (Carr & Kemmis, 2006, pp. 5-6) and is often divided into four phases – planning, acting, observing, and reflecting. To reflect the iterative process of action research, the project was divided into cyclical development stages where earlier development was used to inform later decisions and development. A summary of these project cycles is shown in Table 1.

Table 1: *Project cycles*

Cycles	Phases	Action
Cycle 1	Planning	Exploratory interviews with management, teachers and learning support.
	Acting	Creation and critique of flowcharts, forms and dashboards.
	Observing	Focus group to review the feedback and propose changes.
	Reflecting	Revision to project objectives and dashboard designs.
Cycle 2	Planning	Internal discussion and agreement on new features and updates.
	Acting	Deployment of forms and dashboards with limited staff training.
	Observing	Sending a form to teaching staff inviting them to join the study. This qualified staff by asking them about their exposure and experience in using the dashboards.
	Reflecting	Presentation of results from project first stage and observations.

An important emphasis in our study was double-loop learning. Unlike single-loop learning which seeks to address the ‘problem,’ double-loop learning addresses the underlying mental model(s) and challenges these concepts (Argyris, 1980). Our project cycles applied double-loop learning as we captured evidence from observing and reflecting on cycle 1 to inform further development in cycle 2. Our findings also helped us support teachers in our schools by providing feedback on their teaching and learning through the dashboards.

Research participants

The study relied primarily on evidence collected through interviews and focus groups. Initial interviews with key project stakeholders from both schools helped draft flowcharts, forms, and static dashboards. These designs were then explored and developed by an exploratory focus group of three selected

teachers and career counsellors from both schools. In joining the study, participants in the latter focus group completed a research form that collected background details and their use of the dashboard. A further recorded focus group composed of five participating teachers and two career counsellors from both schools explored the deployed dashboards and implementation process. This recorded focus group was conducted online and in English due to COVID-19 restrictions. A summary of participants is shown in Table 2.

Table 2: *Participants' profiles*

Participants	Gender	School	Role	Experience
Cindy	Female	School A	Learning Support & Teacher	> 10 years
Chantelle	Female	School A	Teacher	1 – 3 years
Barry	Male	School A	Teacher, Learning Support & Career Counsellor	> 10 years
Neil	Male	School A	Teacher	> 10 years
Jenny	Female	School B	Teacher	>10 years
Makara	Male	School B	Learning Support & Career Counsellor	4 – 6 years

All teaching staff at both schools had significant experience using computers in their teaching, especially since COVID-19 lockdowns moved teaching online. Given the teaching context, teacher experience, and relative simplicity of the dashboards, the team felt minimal teaching training was needed and only conducted a short five-minute demonstration during a staff meeting and sent a short email answering some anticipated questions.

Evidence was collected from the focus groups and analysed using QDA Miner. Categories and codes were created based on the UTAUT model and the proposed project stages. Codes were reviewed multiple times and by at least two team members. Quotes from participants in the latter focus group are included in the next section.

As with other action research studies, there was tension in balancing the role of researcher and team member during the project design, development, and implementation (Simonsen, 2009). Our small team included a diversity of roles,

with team members being career counsellors, secondary teachers, and Learning Support in the represented schools, and their perspectives inevitably influenced their peers. Furthermore, the selection process encourages participation by teachers who are positive about the project's potential and does not reflect the opinions of all teachers. Nevertheless, we believe our project aims and approach are aligned with those proposed by Sagor (2000) for action research to create reflective teachers, build professional cultures and progress institutional priorities and that our outcomes will help our schools improve their teaching and learning tools.

Dashboard design

The dashboards sought to support staff in lesson preparation, interventions, and career preparation at an individual and class level. The information displayed through the dashboards included student name, nationality, personality, student identified values, student interests, student preferences for learning new information, student preferences for reinforcing learning, student preferences for learning conditions, student preferred assessments, career fields, and university preferences (including university and intended university activities). We also introduced security to protect information integrity and restrict dashboard access to the appropriate staff.

Findings and discussion

This section is divided into subsections exploring the dimensions identified by Venkatesh et al. (2003) in the UTAUT model before exploring how dashboards can support teaching and learning and concluding with further development and research.

Social influence

There was no clear evidence in the study that social influence played any significant impact on the adoption of dashboards by participants. These results are consistent with other research on the acceptance and use in the implementation of Learning Management System (LMS) platforms in higher education in Saudi Arabia (Al-Shehri, 2017) and Jordan (Abbad, 2021) based on the UTAUT model which they attribute to familiarity with a digital

environment. While this is also true of staff in these schools, we believe a better explanation is that staff had no previous experience using dashboards in a formal education context or as a tool to inform teaching and learning. Given the short project cycles (around two months), we believe there was insufficient time for social attitudes and norms to form on the use or design of dashboards. We expect this to change in subsequent project cycles as staff undertake further training on cognitive diversity, and we further promote the use of the dashboards within the school communities.

Performance expectancy

Our study identified that all three roles were impacted by the dashboards – teachers, career counsellors, and learning support. Teaching staff believed dashboards were useful and relevant in their teaching role. Neil shared how he believed:

This dashboard gives us the ability to really focus on teaching the class as a composition of individuals rather than just on reaching the one student.

He believed this could change lesson preparation in the future within both schools. Cindy shared how:

Seeing the different types of ways that students learn [helps] me make sure that I include a pre-recorded lecture or a game or whatever the students like, so I think [the dashboards] will be very useful.

Cindy has since used dashboards in her curriculum development to improve teaching and learning. Chantelle also used concepts she saw in the dashboards when teaching middle school:

I asked [middle school students] how they like to learn, or what seems to be helpful for them. I got those ideas from the dashboards and ...it helped me to differentiate between sixth and seventh grade. The sixth-grade class loves paired learning, or pair-share... In seventh grade they prefer working on their own so they are more of individual workers. ...I think the dashboard can be really helpful, especially when trying to

figure out how to approach a class, [whether] a class in general, or a particular student.

Based on Chantelle's comments, participants suggested extending data collection and dashboards to include middle school in the next project cycle. Cindy also believed that student destinations information helped teachers in curriculum development, as:

Young students asked me, 'why do we need to know this again,' and then I tell them, 'well, even if you're going to become like a race car driver when you grow up,' because some of them want to be race car drivers... Connecting what I'm trying to teach them to where they're headed... is pretty helpful.

Many focus group participants were experienced teachers and believed the dashboards presented significant benefits for new or inexperienced teachers. Makara shared:

Part of being professional is that you [learn] to read your classes, over time... When you are a new teacher [you do not have this ability so] this [dashboard] would be really, really useful.

All the teachers believed that dashboards were useful and perceived them to be an asset in their teaching role, particularly for new or inexperienced teachers. Teachers believed dashboards could help them understand student characteristics like personality, career direction, and preferred learning styles and plan and manage the class learning experience by using preferable assessments, learning activities, and interventions.

Learning support staff also perceived the dashboards to be useful in understanding student strengths and weaknesses and catering to students requiring learning support. These teachers believed the dashboards could improve lesson planning and intervention by better integrating students with and without learning and special needs in the classroom. Makara shared how the Personalised Education Plan (PEP), a plan outlining needs and strategies for the learning needs of gifted and talented students, would be enhanced by dashboards as teachers can:

Look at not only what those learning difficulties [there] are but actually how best does that student learn. We can use that to put that in place in their educational profile. If you are working with the way the students are identified through the dashboard, and this is how they best learn, it will be more helpful for them [if you are able to engage] the student in a way they are wanting to work as well as helping to overcome the learning difficulties that they have.

As dashboards convey information from student surveys, it provides insight into how students perceive the learning experience. Several teachers who were not in learning support also believed dashboards could enhance the PEP reports. Cindy shared that when:

[Talking] about each individual student who has a PEP, [the] dashboard would be a great resource that they could then use to point teachers to... specifically for those students who... may not have the support that other students have.

Likewise, Barry shared:

I actually just used the dashboards in rewriting [this year's] PEPs (Personal Education Plans) as I had such great data on the students... so I was able to incorporate that in the redrafting of their PEPs.

Though not many learning support staff were represented in the study, those represented believed that dashboards were useful for meeting learning needs by improving documentation and supporting lesson planning and intervention. These results reflect similar initiatives in higher education which also linked dashboards to improved lesson planning and interventions (Herodotou et al., 2021; Raffaghelli et al., 2022).

Career counsellors found dashboards useful. Barry shared that:

Dashboards for the specific role of guidance are very relevant because I normally want to gather all of that data through an interview process anyway... [Dashboards are] very relevant for me [as they collect] data ahead of time for a first or second meeting with a student.

Though only a few career counsellors were represented in this study and in the staff community, they recognised how dashboards helped them collect and disseminate student career intentions which reduced meeting times and allowed them to better understand student university requirements. While these initial results are promising, future project developments may be strengthened by improving accountability through shared access between career counsellors, teachers, and students (Darling-Hammond et al., 2014) and to better facilitate meaningful learning in learners and the professional capacity of teachers and career counsellors.

Facilitating conditions

The data showed that managerial support was important in the acceptance and use of dashboards. Jenny shared the importance education management plays in supporting the implementation of dashboards:

I'd probably prefer a check in maybe once a term or semester [from management, to find out] 'Okay, have you checked in with the dashboard to see where students are at right now? Is your teaching in line with that? Do you need to adjust?' A regular reminder, I think, might be helpful.

Furthermore, several participants noted how dashboards could be incorporated into teacher observations and linked to online sources for teacher professional development. Barry explained that:

The only reason to ever do an observation is to help a teacher grow, right? If you are doing an observation, and the observation shows evidence of a need for growth in a certain area, and then you [ideally could be] connected [through the dashboard] to professional development resources as a way to just encourage that development, growth [will happen] for sure.

Most participants expressed a belief that managerial support in the form of periodic encouragement and better integration of the dashboards into school culture would increase dashboard use. While this supports research by Nistor et al. (2012) that professional culture is an important factor in technology adoption, this research differed in having no clear evidence that national

culture impacted the project. This is surprising given the staff diversity within both international schools but reflects that all participants that volunteered for the focus group were expatriate staff. Future cycles must explore how school and national cultures influence dashboard acceptance and use with particular focus on potential impacts for Cambodian staff.

Effort expectancy

Several themes about effort expectancy consistently emerged. The first was that there was inadequate training and support. Chantelle shared about the importance of:

Doing [training on the dashboards] during training week before school starts. I had to fiddle around with [the dashboard] for quite a bit and if it's something that I feel like I have no idea how to use, it's harder to want to use it.

Jenny added:

When teachers see the application and the ease of it and the usefulness in practice, they're more likely to use it.

Despite the earlier demonstration, the teachers believed better training was needed to use the dashboards – reflecting research by Raffaghelli et al. (2022) that technology familiarisation is necessary to support the acceptance and use of dashboards in education contexts. Staff further expressed how dashboards were not user-friendly as they contained too much data and could be confusing. Chantelle shared that:

It's got a lot of good information, but sometimes too much information can make it overwhelming... I think the way the information is organised can be improved. The information in the dashboard is useful, but too much information makes the information hard to understand.

During this development stage, dashboards were designed to visualise as much information to as many roles as possible. Feedback suggests this approach is counter-productive and analysis is likely to improve by structuring dashboards to target information needs. For some participants, this meant having

information spread over multiple dashboards and more 'white space.' Other participants recommended structuring information to align with the learner journey and progression of students as Thanh et al. (2021) noted in calling for a 'simple framework' with less information. In contrast, Raffagheill et al. (2022) found their users instead had higher expectations of dashboards. The contrasting perspectives show that the project team must engage users to better identify and 'fit' user needs (Klein et al., 2019) as these likely differ with the context.

Using dashboards to support teaching and learning

Despite strong staff feedback about the perceived usefulness of dashboards, staff acceptance was limited by insufficient training, managerial support, and professional development. These findings are consistent with earlier findings that user acceptance could be hindered by insufficient training but enhanced by providing user training and support (Compeau & Higgins, 1995). As the perceived usefulness and ease of use improve through staff training on using the dashboards, the literature suggests higher acceptance and use (Davis et al., 1989).

We also believe dashboards must be better incorporated into the teaching and learning philosophy of each school. Staff believed this could include professional development on applying dashboard information to lesson planning and delivery, teaching observations, and performance reviews. This could occur by linking dashboard information to online professional development resources. As Barry shared:

I think [professional development could be useful in] connecting the dashboards to differentiation... and teacher planning [so there is professional development content on] ... differentiation understanding, some of the different learning styles of your students and how that then plays into your lesson planning and some of your activity choices.

A model illustrating how dashboards must be developed is shown in Figure 2. We recommend ongoing development of the dashboards as an educational tool, but more importantly, integrating this tool with the school teaching and learning philosophy and professional development. Finally, we believe implementation must be supported by management through extrinsic

motivators and reinforced in teaching practice in observations and performance reviews.

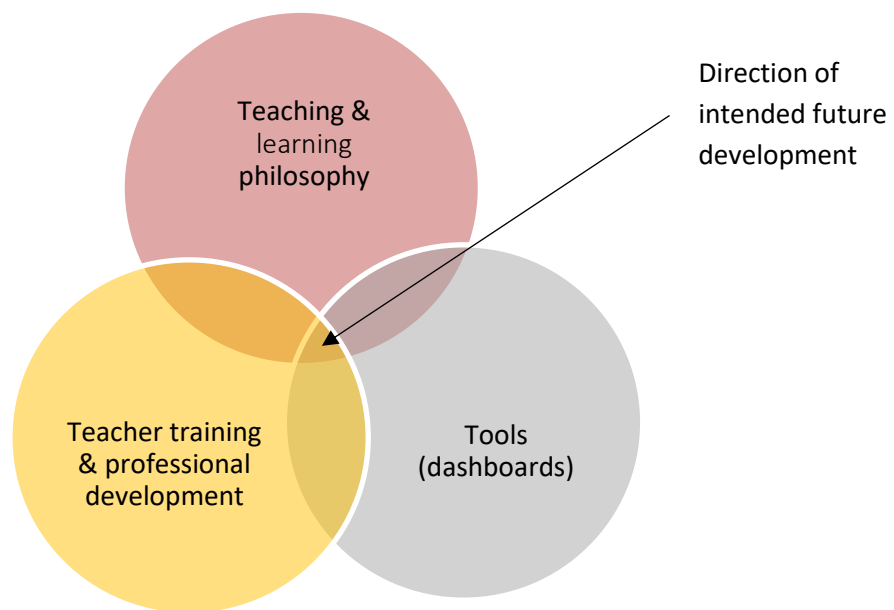


Figure 2. Framework for supporting teaching and learning

Further dashboard development and research

Teaching and learning support staff recommended changing the current functional dashboard design that segments information based on roles to better align with the learner journey. Cindy suggested:

I want to see... information as a class... [as well as individually so] when you have an issue with one student [and think] 'why are they not understanding, what can I do to help them'... I can see the student details as well.

Cindy also shared how she would like information segmented. She said:

[The] first thing that I'm going to want to know is how my students learn. That's the goal of [the] lesson plan... so that they can learn.

Jenny also shared that:

From a teacher's point of view that kind of a progression [starting with who I am as a student] makes the most sense for me. ...If I went into it

and I could see that aspect of the student's journey, it would be more relevant from a teacher's perspective.

Building on feedback, we planned future project cycles to build on three questions: "who is my student?" (student personality, interests, and values), "how do my students learn?" (learning styles of individual students and classes), and "what are the outcomes?" (intended and actual academic, social and spiritual outcomes of students). Participants also requested that dashboards more clearly emphasise teaching and learning methods relevant during COVID-19 lockdowns and include student family and faith characteristics – aspects previously captured by Learning Support but not shown in current dashboards. We believe the additional information and new design will help make the dashboards more aligned to teacher expectations and intended use.

Although our study validated aspects of the UTAUT model, further project cycles and study is required. Some factors, such as the perceived ease of use and perceived usefulness, were consistent themes and aligned with earlier TAM research (Granić & Marangunić, 2019). Other factors, like the influence of social support, national culture or user intentions, may influence future acceptance and use of dashboards by staff but require further validation in upcoming project cycles. While our intent was to use the UTAUT model as a holistic and 'unified' approach, the model was too complex to easily explain staff acceptance and use of the dashboards within the project. We recommend future project cycles use the earlier TAM as the factors identified in TAM more clearly explain teacher acceptance and use of dashboards and can be more rigorously tested.

Conclusion

The use of 'dashboards' in education has become more prevalent in the past decade and moved from being managerial to practitioner tools. Our study reflected how some staff recognised benefits to their teaching and learning by using dashboards to analyse information about their students. Though dashboard acceptance and use by teachers were high in the focus group, the small participant numbers and concentration of expatriate teaching staff are

unlikely to represent the wider beliefs of staff or Cambodian teachers more generally.

New technologies in software and data analytics have the potential to enhance efficiency as well as student outcomes, both short term and long term. We found dashboards were relevant to multiple school roles including teaching, learning support, and career counselling in secondary school and possibly middle school. This study reflects how, when implementing new education tools and technologies, management must ensure new tools and technologies holistically support intended school outcomes and are implemented and supported with appropriate staff professional development in alignment with the school teaching and learning philosophy.

Our findings show merit in undertaking further project cycles to refine the dashboards and explore how dashboards are adopted and used within these schools and how this impacts teaching and learning. Further research may also expand the current project to include younger grades and how dashboards can more specifically support teachers as they identify and address cognitive diversity. Lastly, future studies should include a larger and more diverse participant group with a higher representation of Cambodian staff and more varied experience with technology so results can better reflect and inform further implementation of similar projects within the Kingdom of Cambodia.

Acknowledgments

We would like to acknowledge the input of all the participants who took part in the focus group discussions and testing of dashboard use. We would also like to thank the leadership of both contributing schools for their support of this project.

Ethics statement

This study was conducted in accordance with the ethics requirements of the Kingdom of Cambodia and the participating schools. Information in this study remained confidential and was restricted to staff. To protect the participants' identity, participant names in this article are pseudonyms. All researchers in

this study were volunteers and did not receive payments or benefits beyond their salary for their contribution to this research.

The authors

Nathan Polley is a professional educator with experience in consulting, education leadership and management, research, corporate training, project management and administration in various senior education management roles in Australia, Aotearoa-New Zealand, Papua New Guinea, Egypt and Cambodia. Nathan currently lives and works in Cambodia, where he works with various business and education leaders to scale their organisations.

Email: nathan.polley@gmail.com

Russell Mills is a Guidance Counsellor with Hope International School, a school located in Phnom Penh, Cambodia. Previously he has worked as a Guidance Counsellor and an English Teacher in various Cambodian private colleges and as an international and professional musician. His interests include introducing jazz music within cross-cultural settings and supporting third-culture kids (TCK's) to thrive in tertiary learning.

Email: russell.mills@hope.edu.kh

References

- Abbad, M. M. M. (2021). Using the UTAUT model to understand students' usage of e-learning systems in developing countries. *Education and Information Technologies*, 26(6), 7205–7224.
<https://doi.org/10.1007/s10639-021-10573-5>
- Alharbi, S., & Drew, S. (2014). Using the Technology Acceptance Model in understanding academics' behavioural intention to use Learning Management Systems. *International Journal of Advanced Computer Science and Applications*, 5, 143–155.
<https://doi.org/10.14569/IJACSA.2014.050120>
- Al-Shehri, M. (2017). The effectiveness of D2L system: An evaluation of teaching-learning process in the Kingdom of Saudi Arabia. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 8(1), 442–448. <https://doi.org/10.14569/IJACSA.2017.080156>
- Argyris, C. (1980). *Inner contradictions of rigorous research*. Academic Press.

- Bagozzi, R. (2007). The legacy of the Technology Acceptance Model and a proposal for a paradigm shift. *Journal for the Association for Information Systems*, 8(4), 244–254. <https://doi.org/10.17705/1jais.00122>
- Bingimlas, K. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics Science & Technology Education*, 5(3), 235–245. <https://doi.org/10.12973/ejmste/75275>
- Brouns, F., Zorrilla Pantaleón, M. E., Álvarez Saiz, E. E., Solana-González, P., Cobo Ortega, Á., Rocha Blanco, E. R., Collantes Viaña, M., Rodríguez Hoyos, C., De Lima Silva, M., Marta-Lazo, C., Gabelas Barroso, J. A., Arranz, P., García, L., Silva, A., Sáez López, J. M., Ventura Expósito, P., Jordano de la Torre, M., Bohuschke, F., & Viñuales, J. (2015). *Elearning, communication and open-data: Massive mobile, ubiquitous and open learning* (D2.5 Learning analytics requirements and metrics report). Elearning Communication Open-Data. <https://repositorio.unican.es/xmlui/handle/10902/15231>
- Carr, W., & Kemmis, S. (2006). *Becoming critical: Education, knowledge and action research*. Routledge.
- Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. *Management Information Systems Quarterly*, 19(2), 189–211. <https://doi.org/10.2307/249688>
- Darling-Hammond, L., Wilhoit, G., & Pittenger, L. (2014). Accountability for college and career readiness: Developing a new paradigm. *Education Policy Analysis Archives*, 22(86), 1–38. <http://dx.doi.org/10.14507/epaa.v22n86.2014>
- Global Information Consultants. (n.d.). Study abroad overview. <https://www.globaledu.in/study-abroad-overview>
- Granić, A., & Marangunić, N. (2019). Technology acceptance model in educational context: A systematic literature review. *British Journal of Educational Technology*, 50(5), 2572–2593. <https://doi.org/10.1111/bjet.12864>
- Herodotou, C., Maguire, C., McDowell, N., Hlostá, M., & Boroowa, A. (2021). The engagement of university teachers with predictive learning analytics. *Computers & Education*, 173, 104–285. <https://doi.org/10.1016/j.compedu.2021.104285>
- Klein, C., Lester, J., Rangwala, H., & Johri, A. (2019). Technological barriers and incentives to learning analytics adoption in higher education: Insights from users. *Journal of Computing in Higher Education*, 31(3), 604–625. <https://doi.org/10.1007/s12528-019-09210-5>

- König, J., Jäger-Biela, D. J., & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: Teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education*, 43(4), 608–622.
<https://doi.org/10.1080/02619768.2020.1809650>
- Li, J. (2020). Blockchain technology adoption: Examining the fundamental drivers. *Proceedings of the 2020 2nd International Conference on Management Science and Industrial Engineering*, 253–260.
<https://doi.org/10.13140/RG.2.2.30288.25602/1>
- Lin, C.-P., & Anol, B. (2008). Learning online social support: An investigation of network Information Technology based on UTAUT. *CyberPsychology & Behavior*, 11(3), 268–272. <https://doi.org/10.1089/cpb.2007.0057>
- Moore, G. C., & Benbasat, I. (1996). Integrating Diffusion of Innovations and Theory of Reasoned Action models to predict utilization of information technology by end-users. In K. Kautz & J. Pries-Heje (Eds.), *Diffusion and Adoption of Information Technology: Proceedings of the first IFIP WG 8.6 working conference on the diffusion and adoption of information technology, Oslo, Norway, October 1995* (pp. 132–146). Springer.
https://doi.org/10.1007/978-0-387-34982-4_10
- Nistor, N., Lerche, T., Weinberger, A., Ceobanu, C., & Heymann, O. (2012). Towards the integration of culture into the Unified Theory of Acceptance and Use of Technology. *British Journal of Educational Technology*, 45(1), 36–55. <https://doi.org/10.1111/j.1467-8535.2012.01383.x>
- Prusak, L. (2010, October 7). What can't be measured. *Harvard Business Review*.
<https://hbr.org/2010/10/what-cant-be-measured>
- Raffaghelli, J. E., Rodríguez, M. E., Guerrero-Roldán, A.-E., & Bañeres, D. (2022). Applying the UTAUT model to explain the students' acceptance of an early warning system in Higher Education. *Computers & Education*, 182, 1–14. <https://doi.org/10.1016/j.compedu.2022.104468>
- Sagor, R. (2000). *Guiding school improvement with action research*. Association for Supervision and Curriculum Development.
<http://site.ebrary.com/id/10115189>
- Setyohadi, D. B., Artisan, M., Sinaga, B. L., & Hamid, N. A. A. (2017). Social critical factors affecting intentions and behaviours to use e-Learning: An empirical investigation using Technology Acceptance Model. *Science Alert*, 10(4), 271–280. <https://doi.org/10.3923/ajsr.2017.271.280>
- Sheppard, B., Hartwick, J., & Warshaw, P. (1988). The Theory of Reasoned Action: A meta-analysis of past research with recommendations for

- modifications and future research. *Journal of Consumer Research*, 15(1), 325–343. <https://doi.org/10.1086/209170>
- Simonsen, J. (2009). The challenges for action research projects. *Scandinavian Journal of Information Systems*, 21(1), 124–141.
- Sykes, T. A., Venkatesh, V., & Gosain, S. (2009). Model of Acceptance with peer support: A social network perspective to understand employees' system use. *Management Information Systems Quarterly*, 33(2), 371–393. <https://doi.org/10.2307/20650296>
- Taylor, S., & Todd, P. (1995). Assessing IT usage: The role of prior experience. *Management Information Systems Quarterly*, 19(4), 561–570. <https://doi.org/10.2307/249633>
- Thanh, T., Td, D., Le, D. H., & Jr, P. G. A. (2021). Simple student grades analytics dashboards in higher education in Vietnam. *Journal of Contemporary Issues in Business and Government*, 27(1), 445–453.
- Thompson, R. L., Higgins, C. A., & Howell, J. M. (1994). Influence of experience on personal computer utilization: Testing a conceptual model. *Journal of Management Information Systems*, 11(1), 167–187. <https://doi.org/10.1080/07421222.1994.11518035>
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. *Advances in Experimental Social Psychology*, 29(2), 271–360. [https://doi.org/10.1016/S0065-2601\(08\)60019-2](https://doi.org/10.1016/S0065-2601(08)60019-2)
- Van Raaij, E., & Schepers, J. (2008). The acceptance and use of virtual learning environment in China. *Computers & Education*, 50(1), 838–852. <https://doi.org/10.1016/j.compedu.2006.09.001>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of Information Technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- Wang, H., & Wang, S. (2010). User acceptance of mobile internet based on the Unified Theory of Acceptance and Use of Technology: Investigating the determinants and gender differences. *Scientific Journal Publishers*, 38(3), 415–426. <https://doi.org/10.2224/SBP.2010.38.3.415>
- Young, M. R., Rapp, E. M., & Murphy, J. W. (2010). Action research: Enhancing classroom practice and fulfilling educational responsibilities. *Journal of Instructional Pedagogies*, 1–10. <http://files.eric.ed.gov/fulltext/EJ1096942.pdf>

Enhancing students' motivation in foreign language learning

Panharith Nat

*Royal University of Phnom Penh
Phnom Penh, Cambodia*

Abstract

Motivation has been considered one of the main contributing factors to academic success, particularly in foreign language learning classes where there is little contact with the target language community. This is because highly motivated students tend to be ready to learn and engage themselves in the lesson, which allows them to receive more input that will help them to succeed in language learning. Hence, motivation is regarded as an internal power that drives students' abilities to perform well. However, it is worth noting that motivation in foreign language learning is complicated as every language student walks into the class with different levels of motivation, requiring teachers to be creative in designing the lesson to help them meet their needs and goals. This article discusses common types of motivation and their importance, as well as ways to sustain students' motivation in language learning. The article concludes with a variety of classroom tips that can be useful in keeping students motivated in learning during the COVID-19 pandemic.

Keywords: Motivation; foreign language learning; types of motivation; online learning

ARTICLE HISTORY

Received 2 January 2022

Accepted 19 June 2022

Introduction

Motivation is widely believed to be a significant factor determining success in most fields of learning because to achieve success, a person needs to have a desire driving them to act. Without such drive, an individual may not make any efforts to do something to achieve a goal. Therefore, success or failure in a foreign language learning context where students appear physically and emotionally isolated from the second language (L2) community depends on students' motivation (Dörnyei, 1990; Thohir, 2017). This means that if language students are motivated, they are likely to acquire L2 regardless of language abilities. In contrast, those with sufficient intelligence cannot attain any L2 goals if they are not motivated (Hadfield & Dörnyei, 2014). As Filgona et al. (2020) pointed out, unmotivated students only attend the class physically without intending to learn anything, which is different from motivated students who are cognitively ready to acquire new things, thereby making the classroom environment interactive and fun as a result of their enthusiastic engagement.

Given its importance, McCoach and Flake (2018) regard motivation as an internal drive that pushes students' abilities to perform well. This concept is closely aligned with Williams and Burden's (1997) definition of motivation; that is, it is a state of cognitive arousal which provokes a decision to act; as a result, there is sustained intellectual and physical effort to achieve previously set goals. However, motivation in foreign language learning is complex because every language student gets into the classroom with different levels of motivation, requiring teachers to be creative in designing the lesson that can arouse their motivation. Against this background, this article discusses common types of motivation and their importance before offering ways to sustain foreign language students' motivation. The article concludes with classroom tips that can be useful to engage students further and help them stay motivated in their learning during the COVID-19 pandemic.

Types of motivation

Due to the interrelation between language and culture, language learning entails not only understanding vocabulary and grammar but also becoming a part of the L2 culture to some extent (Brown, 2002). Based on the assumption that students may appear to be motivated by their positive attitudes toward or

aspirations to be a member of the L2 community, Gardner and Lambert (1972) classified motivation into two types: integrative and instrumental. The former refers to language learning aimed at becoming L2 members, while the latter can be characterized as learning for functional purposes – acquiring L2 skills for better employment (Brown, 2000; Dörnyei, 1990; Gardner, 1985).

In the context of foreign language learning, students have little interest in integrating themselves into the L2 culture (Dörnyei, 1990). Thus, learning a foreign language, according to Leaver et al. (2005), may have been driven by some internal and external factors such as personal interest, the need for a future career, or parental influence. All these are what self-determination theorists have described as intrinsic and extrinsic motivation. Drawing on the definition of motivation by Williams and Burden (1997), Harmer (2001) distinguished between intrinsic and extrinsic motivation. Intrinsic motivation is an internal force that pushes individuals to complete a task or participate in an activity to satisfy their curiosity or excitement. Extrinsic motivation, on the other hand, refers to any sort of external stimulation that motivates students to engage in an activity to attain a certain goal, such as passing an exam or earning a reward (Harmer, 2001). In a similar view, Ryan and Deci (2000) and Schunk et al. (2014) defined intrinsic motivation as a voluntary involvement of individuals in any academic activities for their pleasure regardless of external pressure or reward. More specifically, these activities seem to have been a particular kind of special reward found in each individual (Ryan & Deci, 2000; Schunk et al., 2014). In contrast, extrinsic motivation, as Ryan and Deci (2000) put it, is an engagement of the individuals in any tasks or activities with an anticipation of some separable outcomes, such as earning rewards, receiving praise, fulfilling academic requirements, or avoiding punishment (see also Brown, 2000; Niemiec & Ryan, 2009; Schunk et al., 2014). Therefore, such outside influences encourage language students to take part in academic tasks, even if the tasks themselves are not interesting (Chow & Yong, 2013).

The importance of motivation

Research has shown that these two types of motivation, intrinsic and extrinsic, have various impacts on students. For example, Cho (2012) and Niemiec and Ryan (2009) noted that intrinsic motivation helps improve students' progress, making them more process-oriented and determined in learning and likely

turning them into autonomous students who seek growth and self-development. Furthermore, students who possess this kind of motivation are more likely to take risks in their learning, do challenging tasks to broaden their knowledge, enthusiastically engage in activities while remaining highly focused with a clear determined goal, know exactly what they are doing, and critically reflect on their learning (Csikszentmihalyi & Nakamura, 2014). They also prefer to learn or do tasks on their own without any external forces or assistance from the teacher and draw a connection between what they have learned in school and their own experiences (Stipek, 1988, as cited in Chow & Yong, 2013). Moreover, intrinsic motivation enhances success in language learning, for internally motivated students will make every effort for their self-esteem and fulfillment and optimistically continue to learn regardless of the presence or absence of external rewards (Maslow, 1970; Schunk et al., 2014).

Even though intrinsic motivation plays such a vital role, extrinsic motivation should not be overlooked. Certain external factors, such as rewards and the relevance of the task, are said to serve as a major source of motivation to encourage students to learn when given a task that looks boring or when they feel demotivated to participate (Cho, 2012; Niemiec & Ryan, 2009). For this reason, Assor et al. (2002) suggested that teachers should engage students by explaining to them the fact that their willingness to work on and contribute to classroom tasks will in some ways help them accomplish their set goals. Thus, it can be concluded that intrinsic motivation alone cannot always encourage students to learn. Therefore, for successful language teaching and learning, teachers should understand these types of motivation to help students to achieve their learning goals.

Sustaining students' motivation in language learning

Motivation plays a leading role in language classrooms as the flow of every learning activity is determined by student motivation. Without it, a class is just an abandoned room. Given this importance, knowing factors affecting students' motivation can aid teachers in directing and getting their students to continuously engage in academic activities (Thohir, 2017). Harmer (2001) and other researchers such as Gilakjani et al. (2012) and Niemiec and Ryan (2009) identified at least four factors that influence students' motivation in language learning.

First, social attitudes of family, friends, and living environment may play a part in influencing students' attitudes to the language being learned. Students' attention and seriousness in language learning depend on the supportive attitudes of these environments. Second, the teachers' attitude is another source of influence on student motivation, fostering their curiosity and interest in learning. Third, teaching methods and materials also affect students' motivation and excitement in the classroom. Last, students' personalities can be another factor influencing their motivation. It is worth noting that every student possesses distinctive characteristics – some are active and confident while others are passive and shy, thus having different learning styles. For these reasons, teachers should implement a variety of techniques as suggested below to influence and increase students' motivation.

As a role model in the classroom, it is necessary for teachers to be professionally dressed, show enthusiasm for language, and pay close attention to students' progress, thereby making students' interest in the subject grow (Dörnyei & Csizér, 1998). As their interest expands, Dörnyei (1994) argued that students are willing to take their learning more seriously and take more risks to reach their goals in learning a foreign language. One of the possible ways to achieve this is to integrate some sort of relaxing activities, for example, using the target language music to make students develop more interest in the language. Research by Dolean (2016) on the impact of using songs on foreign language anxiety has proved that songs can decrease foreign language anxiety. Moreover, music has been claimed to have helped break down affected barriers and foreign language anxiety, making them more receptive to language learning as a result of a stress-free learning environment (Engh, 2013).

Furthermore, teachers can directly influence students' motivation by using their learning goals (Harmer, 2001). Long-term objectives, such as obtaining competency in the L2, and short-term goals, such as being able to write a short paragraph, are the two sorts of learning goals that students have. As long-term goals might be difficult to achieve, teachers should employ short-term goals to encourage students by assisting them in completing weekly assignments, which will have a substantial impact on their motivation. According to Ushioda (2014), the feeling of achieving these short-term goals can help students to develop perceptions of competence that lead to cultivating and strengthening their intrinsic motivation for learning.

Teaching approaches, activities, materials, and instructional practices all influence students' excitement in the classroom. Hence, handouts and worksheets should be neatly and well organized. At the same time, various activities should be designed to meet diverse types of intelligence (Degrave, 2019) to keep students engaged and their enthusiasm high. Concurrently, providing tasks must be somewhat challenging because language students are more motivated when they accomplish tasks that are neither too easy nor too difficult (Harmer, 2015; Schunk et al., 2014). Besides, when presenting the task, teachers should keep their instruction short, simple, clear, and well-organized (Filgona et al., 2020; Martin, 2020) so that the students know and understand the clear goal of doing it because the way the task is presented is influential in raising students' interest in the activity (Dörnyei & Csizér, 1998). For this reason, the task itself should be relevant to students' interests and experiences so that they can relate it to their personal lives.

Establishing a supportive learning environment that allows students to catch up with one another and make mistakes without fear of being judged by other classmates can be an essential means of sustaining students' participation in classroom activities. Dörnyei and Csizér (1998) stated that activities that can generate such pleasant atmospheres include games or game-like competitions. When students sense this emotionally positive atmosphere, they will voluntarily engage in the activities, which will in turn keep them progressing and motivated.

Moreover, praising students and offering constructive feedback can be powerful tools to sustain their engagement in classroom activities because they not only strengthen students' confidence and self-esteem (Filgona et al., 2020) but also provide a feeling of competence and self-determination that will eventually lead to maintaining their motivation (Thohir, 2017). According to Dörnyei and Csizér (1998), such competence is subjective, meaning that it is certainly not what a person knows or can do but what he or she thinks he or she knows and can do. Therefore, feedback should contain information that is firmly convincing to the students that they are competent enough to complete their task if they put more effort and show them some positive examples that the task itself can be achieved within their resources (Dörnyei & Ushioda, 2011). Further, feedback should be given regularly (Dörnyei, 2001) and delivered in a kind manner by, for example, beginning with the good points before pointing

out what needs to be improved (Filgona et al., 2020). This can make students believe that making mistakes is a simply natural part of learning.

In addition to praise, some sort of reward can also help maintain students' motivation. Thus, to avoid negative impacts on students' motivation, teachers should offer such incentives when students have accomplished a difficult assignment rather than just doing it for their sake (Schunk et al., 2014) or participating in the activity (Dörnyei, 2001; Dörnyei & Ushioda, 2011). Brophy (2010) and Schunk et al. (2014) advised that giving rewards should be associated and provided with informative feedback on students' progress and improvement in the language, ensuring that students witness their language development. This way will eventually foster students' motivation to learn and progress.

Finally, giving students chances to explore the language on their own and take charge of their learning can be another way to motivate them. According to Ryan and Deci (2000), students become more intrinsically motivated when given opportunities to study independently. This can be encouraged through collaborative learning; that is, the use of group work that provides students with choices and voices in the activities (Assor et al., 2002; Brown, 2000; Niemiec & Ryan, 2009), and the use of self-assessment to help students evaluate their progress (Farrel & Jacobs, 2010). Moreover, Dörnyei and Csizér (1998) suggested that students should take as much responsibility as possible in their learning. This can be done by having them involved in organizing the learning process and deciding on the learning materials. As Dörnyei (2001) and Farrell and Jacobs (2010) put it, having a choice allows students to witness that their learning is their responsibility. Thus, when they realize that success or failure in their learning relies on their efforts and strategies (Dickinson, 1995), they will try harder, which will eventually make them more independent and obtain a better chance of achieving L2 (Brown, 2000). Furthermore, teachers should consider adopting a role of a facilitator, who creates a classroom environment that allows not just everyone to self-direct their learning but also for more capable peers who may know better techniques to provide scaffolding to lagging-behind classmates (Dörnyei, 2001). Dörnyei also asserted that such peer teaching practice could be an effective approach for low achievers to catch up with others.

Motivating students in online learning

The rapid spreading of COVID-19 has forced educational institutions globally to switch from physical to virtual classrooms (Heng & Sol, 2021; Sun, 2020). This sudden shift has given teachers tough times adjusting their teaching techniques and materials to adapt to this new normal. As a result, teachers tend to fail to engage students and maintain their motivation in learning as some students, instead of paying attention to class, spend time browsing Facebook, streaming videos on Tik Tok, and even playing online games, while others have been discouraged by tons of assigned works and by disengaging teaching techniques that prevent them from learning what they are supposed to (Sun, 2020). For this reason, to some students, participating in an online class is similar to exploring an unknown island (Sun, 2020). To make online classes more effective and practical, teachers should adapt and vary teaching activities to sustain students' motivation. In addition to what has been mentioned above, what follows are some more tips to help teachers motivate their students during online classes.

First, teachers should schedule the meeting for the class in a well-organized manner and be on time for every session, just as in physical class, because students will choose to do other activities like online gaming while waiting for teachers. Given this problem, starting class in or on time can develop discipline in students and exhibit care and commitment made by the teachers. Thus, students are likely to take their learning more seriously, actively participate in learning activities, and become more punctual (Gilakjani et al., 2012).

Second, teachers should start the class every week by letting students know what they are supposed to do and what they will get after doing that. These kinds of goals, as Oxford and Shearin (1994) argued, have to be specific, difficult but attainable, agreed upon by the students, and accompanied by constructive feedback. When goals are precise and achievable, students will be able to cultivate realistic expectations about their L2 learning (Dörnyei & Csizér, 1998) which will in turn give them reasons to engage in the lesson and put more effort into it.

Third, teachers should assist students in organizing their study plans so that they can remain focused while studying remotely. The study plan can act as a self-motivating language learning strategy that helps students to accomplish

their goals. It is important to note that some students, even without their teacher's assistance, still strive for their goals more than others (Dörnyei & Ushioda, 2011). The reason behind this is self-motivation which refers to an effective and meaningful positive thought about the learning experience, learning goals, and personal control of one's engagement in learning (Ushioda, 1997, as cited in Dörnyei & Ushioda, 2011). According to Dörnyei (2018), to cultivate self-motivation, students should be encouraged to create their future vision – what they want to see their L2 selves in the future – to generate their desire to learn the L2. Dörnyei and Kubanyiova (2014) proposed that this future self-guide can be effectively enhanced with a sharp vision that is realistically expected and achievable. Once they have a clear picture of their desired L2 selves, they will employ various strategies to help themselves get through any challenges during online learning while remaining self-motivated.

Fourth, teachers should make the class more interactive and lively by integrating online games such as Kahoot or Quizizz as a new form of formative assessment rather than using quizzes or mini-test to evaluate students' progress. Wang and Tahir (2020) have presented a finding that indicated positive impacts of using Kahoot (i.e., a game-based learning platform) in assessing students' learning despite some technical challenges. Their study found that Kahoot could provide a real-time assessment of students' grasp of the lesson, increase motivation and engagement, enhance concentration and perceived competence, and promote the students' enjoyment, satisfaction, and self-esteem.

Fifth, during the class, each student should be called to answer questions to keep them from getting distracted by the environment or other online activities. Also, everyone must be given fair chances to participate in every classroom activity, thus resulting in a sense of togetherness that encourages students' voluntary participation in the activities (Niemiec & Ryan, 2009; Ryan & Deci, 2000).

Sixth, to show appreciation for students' contributions, teachers should use emojis or GIFs to praise them or create virtual certificates to celebrate their achievements. In addition, marks and grades are powerful extrinsic motivators that can keep adult students engaged. However, in online classes, rewards should be given to those who interact maturely and respectfully and put their efforts into completing the tasks because these incentives will make appropriate

behaviors continually show up and reflect hard work and better progress in learning (Brophy, 2010; Schunk et al., 2014).

Seventh, as the pandemic has given students studying online more stress, anxiety, and isolation from teachers and peers (Daniel, 2020; Gillet-Swan, 2017, as cited in Heng & Sol, 2020), teachers should encourage collaborative learning by assigning them to work in pair or group so that students can have time to discuss different topics, share and learn from one another, as well as develop interpersonal relationships with each other as if they were in the physical classroom. This kind of activity will not only remove students' feelings of isolation but also allow them to build up social networking among themselves (Stavredes, 2011). Besides, teachers should establish a good interpersonal relationship with the students by chit-chatting and letting them express their fear or worries to reduce their feeling of isolation (Stavredes, 2011). Furthermore, calling out students' names and paying attention to their personal information, such as hobbies and birthdays, can make them feel warm. Martin (2020) suggested that teachers should also keep in touch with students through various means such as email, class group chat, or the school's online learning platform.

Lastly, using a soft tone can also make students feel comfortable and less tense when joining the class. Woolway (2021), for example, indicated that tone of voice does have an impact on students' attention. His study showed that the tone of voice could make students stay engaged in the lesson when getting distracted, and a change in voice could help bring back students' attention to what was being said. In short, these suggestions may be helpful for teachers to keep their students motivated and engaged in online classes.

Conclusion

Motivation is an internal force that turns students' abilities into action. In foreign language learning, it is one of the main factors determining success. However, it has generally been neglected by language teachers. This article has demonstrated that different types of motivation, intrinsic and extrinsic, do have a significant impact on language students, and keeping them motivated is teachers' responsibility. Thus, teachers should be committed and enthusiastic toward the target language, employ students' goals, vary teaching activities

that give students choices, and create a supportive and interactive learning environment in which making mistakes is just a natural part of learning. During online learning, teachers are recommended to attend to students' social, mental, and emotional well-being through close communication, engage them through various gamification, and use collaborative learning.

Finally, to gain more insight into language students' motivation, consideration should be given to research into factors affecting students' motivation and engagement in online learning. The focus should also be placed on self-motivated strategies that language students implement during remote learning. In addition, research should be conducted to evaluate whether gamified techniques, such as assessing students' understanding through Kahoot or other learning platforms, can be an engaging method for online teaching and a powerful tool to engage students in language education.

Acknowledgments

The author would like to thank the editors of the Cambodian Education Forum, especially Mr. Kimkong Heng and Mr. Koemhong Sol, for their editorial support and the anonymous reviewers for their helpful comments on earlier versions of this article. The author would also like to thank Mr. Kimleng Pech for proofreading and offering advice to improve this article.

The author

Panharith Nat is currently a lecturer of English at the Institute of Foreign Languages (IFL), Royal University of Phnom Penh (RUPP). Previously, he worked as a full-time primary teacher of English at Paññāsāstra International School and as a part-time teacher of English at ASEAN-Cambodia International School in Ang Snoul District, Kandal Province. He received a Bachelor of Education in English from IFL, RUPP. His research interests include literature teaching in EFL contexts, learner motivation, language acquisition, and English language teaching.

Email: panharith.nat1234@gmail.com

References

- Assor, A., Kaplan, H., & Roth, G. (2002). Choice is good, but relevance is excellent: Autonomy-enhancing and suppressing teacher behaviours predicting students' engagement in schoolwork. *British Journal of Educational Psychology*, 72(2), 261–278.
<https://doi.org/10.1348/000709902158883>
- Brophy, J. (2010). *Motivating students to learn* (3rd ed.). Routledge.
<https://doi.org/10.4324/9780203858318>
- Brown, D. H. (2000). *Principles of language learning and teaching* (4th ed.). Addison Wesley Longman.
https://www.academia.edu/download/40433526/_H._Douglas_Brown_Principles_of_language_learningBookZZ.org.pdf
- Brown, H. D. (2002). *Strategies for success: A practical guide to learning English*. Addison Wesley Longman
http://ndl.ethernet.edu.net/bitstream/123456789/88319/1/%5BH._Douglas_Brown%5D_Strategies_for_Success_A_Pract%28book.org%29%20%281%29.pdf
- Cho, Y.-G. (2012). The relationship between L2 learning motivation and context among Korean EFL students. *English Teaching* (영어교과), 67(1), 79–105. <http://doi.org/10.15858/engtea.67.1.201203.79>
- Chow, S. J., & Yong, B. C. S. (2013). Secondary school students' motivation and achievement in combined science. *US-China Education Review B*, 3(4), 213–228. <https://files.eric.ed.gov/fulltext/ED542966.pdf>
- Csikszentmihalyi, M., & Nakamura, J. (2014). The dynamics of intrinsic motivation: A study of adolescents. In M. Csikszentmihalyi (Ed.), *Flow and the foundations of positive psychology: The collected works of Mihaly Csikszentmihalyi* (pp. 175–197). Springer Netherlands.
https://doi.org/10.1007/978-94-017-9088-8_12
- Degrave, P. (2019). Music in the foreign language classroom: How and why? *Journal of Language Teaching and Research*, 10, 412–420.
<http://dx.doi.org/10.17507/jltr.1003.02>
- Dickinson, L. (1995). Autonomy and motivation a literature review. *System*, 23(2), 165–174. [https://doi.org/10.1016/0346-251X\(95\)00005-5](https://doi.org/10.1016/0346-251X(95)00005-5)
- Dolean, D. D. (2016). The effects of teaching songs during foreign language classes on students' foreign language anxiety. *Language Teaching Research*, 20(5), 638–653. <https://doi.org/10.1177/1362168815606151>

- Dörnyei, Z. (1990). Conceptualizing motivation in foreign-language learning. *Language Learning*, 40(1), 45–78. <https://doi.org/10.1111/j.1467-1770.1990.tb00954.x>
- Dörnyei, Z. (1994). Motivation and motivating in the foreign language classroom. *The Modern Language Journal*, 78(3), 273–284. <https://doi.org/10.2307/330107>
- Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511667343>
- Dörnyei, Z. (2018). Motivating students and teachers. In J. I. Lontas (Ed.), *The TESOL encyclopedia of English language teaching* (pp. 1–6). John Wiley & Sons. <https://doi.org/10.1002/9781118784235.eelt0128>
- Dörnyei, Z., & Csizér, K. (1998). Ten commandments for motivating language learners: Results of an empirical study. *Language Teaching Research*, 2(3), 203–229. <https://doi.org/10.1177/136216889800200303>
- Dörnyei, Z., & Kubanyiova, M. (2014). *Motivating learners, motivating teachers: Building vision in the language classroom*. Cambridge University Press. <https://www.awmemorypalace.com/library/mlmt>
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and researching: Motivation* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315833750>
- Engh, D. (2013). Why use music in English language learning? A survey of the literature. *English Language Teaching*, 6(2), 113–127. <https://doi.org/10.5539/elt.v6n2p113>
- Farrell, T. S. C., & Jacobs, G. (2010). *Essentials for successful English language teaching*. Continuum International. <https://doi.org/10.5040/9781474212205>
- Filgona, J., Sakiyo, J., Gwany, D. M., & Okoronka, A. U. (2020). Motivation in learning. *Asian Journal of Education and Social Studies*, 10(4), 16–37. <https://doi.org/10.9734/ajess/2020/v10i430273>
- Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitude and motivation*. Edward Arnold. <https://publish.uwo.ca/~gardner/docs/SECONDLANGUAGE1985book.pdf>
- Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and motivation in second language learning*. Newbury House. <https://www.awmemorypalace.com/library/gardner-lambert-attitudes-and-motivation>

- Gilakjani, A. P., Leong, L.-M., & Sabouri, N. B. (2012). A study on the role of motivation in foreign language learning and teaching. *International Journal of Modern Education and Computer Science*, 7, 9–16.
<https://doi.org/10.5815/ijmecs.2012.07.02>
- Hadfield, J., & Dörnyei, Z. (2014). *Motivating learning*. Routledge.
<https://doi.org/10.4324/9781315833286>
- Harmer, J. (2001). *The practice of English language teaching*. Longman.
https://www.academia.edu/32715594/jeremy_harmer_the_practice_of_english_language_teaching_3rd_edition_haaa_pdf
- Harmer, J. (2015). *The practice of English language teaching* (5th ed.). Pearson Education. <https://www.scribd.com/document/489136602/FILE-20201226-084033-The-practice-of-English-Language-Teaching-by-Harmer-Jeremy-z-lib-org-pdf>
- Heng, K., & Sol, K. (2021). Online learning during COVID-19: Key challenges and suggestions to enhance effectiveness. *Cambodian Journal of Educational Research*, 1(1), 3–16. <https://cefcambodia.com/cjer-volume-1-issue-1/>
- Leaver, B. L., Ehrman, M., & Shekhtman, B. (2005). *Achieving success in second language acquisition*. Cambridge University Press.
<https://doi.org/10.1017/CBO9780511610431>
- Martin, A. (2020, March 16). *How to optimize online learning in the age of Coronavirus*. UNSW Newsroom.
<https://newsroom.unsw.edu.au/news/social-affairs/how-optimise-online-learning-age-coronavirus>
- Maslow, A. H. (1970). *Motivation and personality*. Harper & Row.
<https://www.eyco.org/nuovo/wp-content/uploads/2016/09/Motivation-and-Personality-A.H.Maslow.pdf>
- McCoach, D. B., & Flake, J. K. (2018). The role of motivation. In S.I. Pfeiffer, E. Shaunessy-Dedrick, & M. Foley-Nicpon (Eds.), *APA handbook of giftedness and talent* (pp. 201–213). American Psychological Association.
<https://doi.org/10.1037/0000038-013>
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7(2), 133–144.
<https://doi.org/10.1177/1477878509104318>

- Oxford, R., & Shearin, J. (1994). Language learning motivation: Expanding the theoretical framework. *The Modern Language Journal*, 78(1), 12-28
<https://doi.org/10.2307/329249>
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67. <https://doi.org/10.1006/ceps.1999.1020>
- Schunk, D. H., Meece, J. L., & Pintrich, P. R. (2014). *Motivation in education: Theory, research and applications* (4th ed.). Pearson.
<https://www.pearson.com/store/p/motivation-in-education-theory-research-and-applications/P100000204085>
- Stavredes, T. (2011). *Effective online teaching: Foundations and strategies for student success*. Jossey-Bass. <https://www.wiley.com/en-us/Effective+Online+Teaching%3A+Foundations+and+Strategies+for+Student+Success-p-9780470578384>
- Sun, S. (2020). 9. Online learning during COVID-19: Challenges and opportunities. In K. Heng, S. Kaing, V. Ros, & K. Sol (Eds.), *English Language Teaching, education, and online learning in Cambodia during COVID-19: Perspectives from practitioners and researchers* (pp. 52-56). Cambodian Education Forum.
<https://cefcambodia.com/2020/12/29/english-language-teaching-education-and-online-learning-in-cambodia-during-covid-19/>
- Thohir, L. (2017). Motivation in a foreign language teaching and learning. *Vision: Journal for Language and Foreign Language Learning*, 6(1), 20-28.
<http://dx.doi.org/10.21580/vjv6i11580>
- Ushioda, E. (2014). Motivation, autonomy and metacognition: Exploring their interactions. In D. Lasagabaster, A. Doiz, & J. M. Sierra (Eds.), *Motivation and foreign language learning: From theory to practice* (Vol. 40) (pp. 31-49). John Benjamins. <http://dx.doi.org/10.1075/llt.40.02ush>
- Wang, A. I., & Tahir, R. (2020). The effect of using Kahoot! for learning – A literature review. *Computers & Education*, 149(2), 1-22.
<https://doi.org/10.1016/j.compedu.2020.103818>
- Williams, M., & Burden, R. (1997). Motivation in language learning: A social constructivist approach. *Cahiers de l'apluiut*, 16(3), 19-27.
<https://doi.org/10.3406/apliu.1997.1201>
- Woolway, H. (2021, April 27). *Teacher's tone of voice in the classroom and how it affects students*. Scholarly Commons.
<https://scholarlycommons.susqu.edu/ssd/2021/posters/44>

Promoting teachers' continuous professional development in Cambodian higher education: Issues and recommendations

Bunhorn Doeur

*University of Southern Queensland
Toowoomba, Australia*

Abstract

Teachers need to continually update their teaching skills and knowledge to keep up with the needs of students and the entire education sector. Many teachers are urged to engage in self-improvement to offer their students the best content and get the best outcomes. However, in the Cambodian context, there are several challenges that affect teachers' continuing professional development (CPD). Key challenges include financial challenges and a lack of support from relevant institutions and stakeholders. As a major facilitator of CPD, the Cambodian government has been involved in various measures to facilitate CPD, especially in the higher education sector. This article discusses the involvement of the Cambodian government in promoting CPD in higher education. It also examines key challenges to CPD provision and offers recommendations to further improve CPD opportunities for Cambodian university teachers.

Keywords: Continuous professional development; higher education; university teachers, recommendations; Cambodia

ARTICLE HISTORY

Received 1 April 2022

Accepted 29 June 2022

Introduction

The higher education sector plays a vital role in national growth as it produces professionals who are involved in all other sectors. Thus, it is a sensitive sector for any country seeking to develop competent workers. Enhancing professional development ensures that teachers are proficient and competent in their profession while furnishing them with essential skills that can help them to progress in their careers. In many cases, however, teachers' continuing professional development (CPD) is usually neglected with the assumption that university teachers are qualified and competent to meet the educational demands of learners and the job market (King & South, 2017). This assumption leads to the continued recycling of old teaching content, meaning that all the graduates learn the same content knowledge over the years (King, 2018a). Government involvement in CPD opens up doors of opportunities to the teaching profession and education sector in general. The most significant benefit of CPD is ensuring that teachers can keep pace with the standards of other teachers who advance their CPD in the same field. Therefore, CPD training can be used as a point of reference for improvement. Governments, therefore, have a role in ensuring that all teachers have some minimum professional qualifications gained through self-improvement. Another benefit of CPD is that it helps teachers to stay interested in the profession. Many governments have been experiencing challenges of high attrition and turnover rate for teachers (Eather et al., 2022; Ebrahim et al., 2021; Fang et al., 2022). Providing CPD means that teachers will be engaged and interested in learning new knowledge and skill areas. It also means that governments do not waste their resources training teachers who leave the profession after some time.

In the Cambodian context, the government has heavily invested in ensuring that teachers keep updating their knowledge to meet the demands of students in both general and higher education in the last two decades (Kov, 2022). The investment in CPD-related matters includes research and development, tuition subsidization through scholarships, infrastructural development, and CPD (Tinio et al., 2022). The higher education enrollment rate in Cambodia stood at 10% in 2011, which was extremely low compared to that of other countries in the region. According to MoEYS (2022), there were 16,676 teachers and 201,900 students in Cambodian HEIs in 2020. Cambodian higher education does not have global recognition, and none of the local universities are ranked as world-

class universities by the QS World University Rankings (Heng, 2020b; Leng, 2022). Cambodian higher education is still at a low standard, way below that of many countries in the Southeast Asian region. The laxity of the Cambodian government to enable CPD has made the level of higher education remain low.

In this article, the role of the Cambodian government in promoting CPD will be discussed. The article will also outline some gaps that the government can bridge to enable CPD in higher education. It concludes with some recommendations on how the government can be further involved in CPD for teachers to improve educational standards.

Rebuilding the higher education sector

Following the genocidal regime in the 1970s, it was estimated that there were 28,000 teachers in 1970, but only 7,000 remained in service in Cambodia in 1979 (Fergusson & Masson, 1997). This was a massive loss to the educational sector, and the Cambodian government had to develop policies to rebuild it. However, education rebuilding would only be possible if the challenges ailing the education sector were identified and resolved (Sam et al., 2012). It was established that systemic issues such as corruption and the patronage system were deeply entrenched and complex, making it difficult to implement reforms (The Asean Post, 2020). Through the Ministry of Education, Youth and Sport (MoEYS), the Cambodian government tried to ensure that these challenges were eliminated to give room for the proposed reforms (Kitamura, 2016). The National Higher Education Task Force created for the redevelopment of the sector also identified the risk-averse mentality as a vital hindrance to introducing educational reforms and innovation (Ahrens & McNamara, 2013). It was established that low teacher salaries and the underfunding of higher education were significant challenges that affected teacher recruitment and motivation (Zhang, 1998).

Over the past few decades, Cambodian higher education did not receive much attention from the government as the focus was on improving the dilapidated basic education (Milton, 2013). Universities received minimal funds that were only adequate for the operational cost and infrastructural development. As a result, many universities were underfunded, making it hard for them to ensure their sustainability (Ford, 2006). The government has, however, worked with

international organizations such as the United Nations and World Bank to offer developmental assistance to Cambodian universities (Ahrens & McNamara, 2013). For example, UNESCO has introduced a STEP Cam program to offer financial and professional support for Cambodian university teachers, while the World Bank has introduced the Higher Education Quality and Capacity Improvement Project and the Higher Education Improvement Project to improve higher education in Cambodia (Beng, 2020; Heng, 2020b). These projects are parts of the World Bank's assistance that seeks to improve the quality and relevance of higher education and research, mainly in STEM (science, technology, engineering, and mathematics) and agriculture, at targeted public higher education institutions and to improve governance in the sector (Beng, 2020). This assistance has somehow made it possible to organize and facilitate CPD, which contributes to an improvement in the overall quality of Cambodian higher education.

Efforts of MoEYS to promote CPD for teachers

MoEYS has been actively rebuilding the education sector (Burkhardt, 2009). It has introduced in-service teachers' CPD activities in all universities. In-service CPD activities are typically viewed as relevant, practical, timely, and topical. They are generally appreciated by teachers who are accustomed to working in isolation with little technical support (MacNeil, 2004). In-service CPD for teachers has played a vital role in ensuring that teachers are enabled to deliver quality teaching as required (Un & Sok, 2018). In-service CPD aims to accomplish educational objectives by incorporating a range of other factors that improve teachers' current professional development (King, 2018b). MoEYS considers CPD as a multifaceted process that imparts skills for effective teaching. The involvement of MoEYS in in-service CPD aims to ensure that teachers are adequately equipped with the necessary knowledge and skills to respond to emerging needs. The Cambodian government has sought to ensure that in-service CPD is a continuous process that goes on throughout a teacher's career (Ros & Sol, 2021). This enables teachers to be updated on the emerging issues and developments in the education sector.

Thus far, the government has taken key steps to implement CPD for teachers (Eam, 2022). The first step involved identifying the key features of effective professional development (Roesken-Winter et al., 2015). It aimed to ensure that

CPD was planned and delivered effectively. The features of effective CPD were identified as content, active learning, coherence, duration of learning programs, and collective learning (Armour et al., 2017). The next step entailed selecting a task force of experts to ensure that these features were available in the proposed CPD sessions. The provision of professional training was conducted cautiously, resulting in positive changes in teachers' pedagogies and classroom practices (Waters, 2021). Finally, MoEYS deployed qualified officers to confirm that the features of effective CPD were reflected in classroom practices (Wallace & May, 2016). The collaboration between universities and ministry officials in assessing CPD implementation had ensured that more teachers were committed to furthering their knowledge base.

MoEYS also has a dedicated department of personnel with a CPD management office. This office was tasked to assist teachers seeking to continue their CPD. It was a part of a program called Strengthening Teacher Education Programs in Cambodia (Vanzin, 2021). The office was opened in August 2020 and sought to support reforms on the establishment of the CPD system and the Teacher Career Pathway for teachers in Cambodia (Meak, 2021). The new office aims to help manage a high-quality, school-based professional development system, which supports and empowers educators to ensure that every public school in Cambodia has well-qualified and effective teachers and school directors (Holmes, 2020). This is achieved through the management and regulation of CPD delivery, which includes benchmarking, accreditation and quality assurance, CPD credits management, and communication with teachers, school leaders, and education specialists. This form of CPD focuses on higher education, which did not attract as much attention as the basic education in the past.

The government has also continued to be actively involved in CPD enhancement for university teachers. For example, through MoEYS, it has developed the CPD Action Plan 2019-2023, which identifies key areas and how they can be addressed using short- and long-term strategies (MoEYS, 2019). These strategies are adopted to implement the key areas to improve the overall face of higher education by promoting CPD. Therefore, teaching is likely to be more interesting if university teachers are given a chance to contribute to developing CPD training sessions. MoEYS has asserted that the success of the action plan depends on the effective implementation and management of key

priority activities. These include the theory of change, management mechanisms, CPD delivery, CPD for teachers, CPD for schools, coaching and mentoring, and monitoring and evaluation (The Phnom Penh Post, 2020). The objective of the action plan is to ensure that teachers are trained for an all-rounded experience that favors quality delivery of education (Bo et al., 2018).

MoEYS has also made several reforms in recent years, aiming to improve the quality of teachers. During the 2020 World's Teacher's Day, the Minister of Education, His Excellency Dr. Hang Chuon Naron, announced reforms that would be undertaken for teachers' improvement (Tolbert, 2018). At first, he noted that teachers had been awarded a pay increase to motivate them. The Minister also claimed that MoEYS would continue working with different stakeholders, particularly the Ministry of Economy and Finance, to explore possible ways to continue to increase teacher salaries (The Phnom Penh Post, 2020). He also outlined several pillars that were the basis of the education policy reforms. These pillars included the implementation of the teacher policy action plan, review of curricula and textbooks, improved learning environments, enforcement of inspections, improvement of learning evaluations, and higher education reforms. This statement for reforms was to show the commitment of the government through MoEYS to promoting CPD among university teachers.

Remaining challenges that constrain CPD provision

Despite the steps taken by MoEYS to improve higher education by providing teachers with CPD opportunities, the sector is still facing many challenges (see Heng & Sol, 2022). The main challenge is the low educational level among university teachers. According to MoEYS (2022), among the 16,438 teachers in both public and private HEIs, there are 3,948 teachers with bachelor's degrees, 11,053 with masters' degrees, and 1,788 with PhD degrees. This number suggests a questionable quality of teaching as those with bachelor's degrees can still teach in the undergraduate programs. This issue also means that there are few qualified CPD trainers because to be qualified, CPD trainers should have master's or PhD degrees.

Another challenge is the inadequate infrastructure for CPD provision, especially in HEIs in rural areas. This makes it difficult to conduct on-site CPD. Teachers from such institutions are forced to take their CPD in other institutions

with the necessary infrastructure and resources for CPD, making it hard for them to fully participate in CPD sessions. Moreover, the existing quality assurance bodies, including internal quality assurance (IQA) and external quality assurance, do not function well. An IQA office has been established at some universities only to satisfy the requirement of the Accreditation Committee of Cambodia (ACC), while other institutions may not have the IQA office established at all (Vann, 2012). Although more universities have the IQA office in place, its operation to ensure the quality of teaching and learning remains an issue, requiring attention from the university management and relevant IQA officers.

In Cambodia, there is an issue with university teachers focusing heavily on teaching to generate income, making it difficult to participate in self-improvement or CPD activities. This issue translates to less interest in CPD as many teachers are busy generating extra income. This problem affects career progression as many university teachers are more oriented toward income generation (Heng et al., 2022). CPD is usually associated with benefits for teachers such as career progression, promotion chances, retention, and commitment (Ros & Oleksiyenko, 2018). However, in the Cambodian context, teachers' promotion and retention are influenced more by the number of classes they can teach than the opportunities for CPD. Therefore, teachers tend to focus more on having more teaching classes, additional responsibilities, and leadership skills which could get them an easier promotion than CPD (Sot et al., 2022). This reluctance to participate in CPD continues to affect the quality of higher education in Cambodia.

Recommendations

The government plays a significant role in ensuring that university lecturers are well prepared and trained to meet the needs of their students. The government's involvement in promoting CPD has been fruitful, suggesting a positive outlook for university teachers who are the first beneficiaries of CPD before it spreads to the learners and eventually the entire higher education sector. Professional development should therefore be continuous to ensure that teachers are adequately equipped with the necessary knowledge to understand the dynamic technology-emerging phases in the education sector (Doeur, 2022).

The following are some recommendations for the Cambodian government to further promote CPD among university teachers.

Strengthening quality assurance mechanisms

It is recommended that the government should strengthen the quality assurance mechanism in higher education by improving the existing curriculum content used for CPD for teachers. Strengthened quality assurance mechanisms can ensure that students are being taught the recommended content materials. CPD for university teachers can enable them to provide learners with the learning content they need. Currently, there seem to be no clear quality assurance measures, although ACC requires every higher education institution in Cambodia to have its own IQA office.

Improving research and innovation facilities

Another strategy the government can pursue to support CPD would be to start and improve university research and innovation facilities. As of 2015, it was established that 64.9% of 444 faculty members from 10 Cambodian universities had never been involved in research at all (Eam, 2022). Since Cambodian HEIs could play a critical role in the growth and development of the country, enhancing research and innovation would be an important way to produce competent professionals through the guidance and assistance of well-trained teachers. The research and innovation facilities would therefore be beneficial to students, teachers, and communities. However, CPD needs to ensure that teachers are properly trained on how to handle and use emerging technologies and other important skills. This can be achieved when the government sets up these facilities in strategic universities to facilitate exchange programs among the teachers who come to improve their profession.

Financing CPD

Lack of adequate funding has been established to be one of the leading impediments to CPD in the Cambodian higher education sector (Tithsatya, 2017). The government has for long paid attention to basic education at the expense of higher education. Although in 2019, the government allocated \$915 million to the education sector, only 33.6% went to higher education, hence

creating a deficit (Heng, 2020a). Increased funding by the government with proper management of HEIs could open doors for effective CPD. Universities themselves find it difficult to offer CPD given the insufficient funds provided by the government. Collaboration between the government, the private sector, and universities could help to increase funding and stimulate improvement in the higher education sector in Cambodia (see Heng 2020b). Cambodia has received funding from international organizations such as the World Bank to improve its higher education and research and broaden access to higher education for vulnerable learners (Bou & Marcela, 2018). This funding can strategically be used to facilitate CPD that will eventually improve teachers' skills, expertise, and knowledge.

Establishing legislation for CPD

National legislation stating the obligation for higher education teachers to have an initial entry training certificate would help promote CPD. These teachers should have a basic level of training that is above the students they teach. This is to ensure that they already have prior knowledge of what their students would want to know. Having national legislation outlining the minimum academic achievement for university teachers would ensure that students are taught by competent teachers. The legislation would also provide directions on how university teachers should carry out their CPD. Having this stipulation as a law would mean that teachers who are reluctant to participate in CPD will have no choice but enroll in CPD or training sessions.

Creating monitoring task forces for CPD

The government can also create a task force to oversee the effective implementation of CPD for university teachers. While the will of individual teachers shapes their decision to be involved in CPD, the government should have a role to play in maximizing the involvement of higher education teachers in their CPD through a clear monitoring mechanism. Otherwise, even those who are willing to take part in CPD are likely to be failed by the lack of support from the government or their institutions. It has been reported that some teachers are reluctant to seek CPD, while others are not supported by their institutions to participate in CPD (Corrado & Tungjan, 2019). Therefore, the government should seek to seal the loopholes that affect the dissemination of

training to all teachers. This can make it easier for individual teachers and universities to participate in CPD training.

Conclusion

This article has shown that the Cambodian government is actively involved in CPD for teachers. Initially, the Cambodian education sector was affected by the civil war and the genocidal regime, leading to the great loss of the teaching staff. Over the past few decades, the government has been making initiatives for teachers' capacity development to address the sector's challenges. The government has tried to eradicate corruption and the patronage system, which has inhibited CPD. It has also identified teachers' low salaries and the underfunding of the sector as key challenges affecting teacher recruitment and motivation. The government has also helped higher education by stepping in to identify effective key features for CPD to ensure success and effectiveness. The CPD management office opened by MoEYS is also an indication of the government's efforts to strengthen CPD in Cambodia, especially in higher education. MoEYS has also introduced the CPD Action Plan 2019-2023, establishing key areas that need improvement to encourage development in the higher education sector.

However, there are remaining challenges. Key challenges that have been frequently discussed include low qualifications among university teachers, inadequate infrastructure for good distribution of CPD, and limited quality assurance mechanisms. The reluctance of many teachers to participate in training sessions is also a common problem for CPD. This is associated with the minimal incentives for participating in CPD, such as limited opportunities for promotion and retention (Sot et al., 2022).

This article has made recommendations on what the government can do to improve higher education standards through CPD. It is recommended that the government should strengthen quality assurance mechanisms, improve research and innovation facilities, finance CPD, establish legislation for CPD, and create a task force for CPD, among other strategies.

Finally, this article has some recommendations for future research. For example, future researchers should conduct actual research involving empirical

data collected from MoEYS officials, higher education institutions' management teams, and teachers to design cost-effective and practical CPD for teachers. Future research should also dig deeper, conduct a cost-benefit analysis, analyze the strengths and weaknesses of the current CPD, and take action to improve the quality of the CPD implementation.

Acknowledgments

The author has received no financial support from any party but would like to thank the editors and anonymous reviewers of the *Cambodian Journal of Educational Research*, especially Mr. Kimkong Heng, for the editorial support and helpful comments on earlier versions of this article.

The author

Bunhorn Doeur is a PhD Candidate in TESOL at the University of Southern Queensland in Australia and a Guest Editor at the Cambodian Education Forum. He has a master's degree in TESOL from the University of Canberra, Australia. He also has extensive experience teaching English and coordinating English language programs in Cambodia. His research interests include teachers' beliefs, students' perspectives, teacher education, TESOL, and teacher professional development.

Email: bunhorndoeur@gmail.com

References

- Ahrens, L., & McNamara, V. (2013). Cambodia: Evolving quality issues in higher education. In L. P. Symaco (Ed.), *Education in South-East Asia* (pp. 47-69). Bloomsbury Academic.
<https://doi.org/10.5040/9781472544469.ch-003>
- Armour, K., Quennerstedt, M., Chambers, F., & Makopoulou, K. (2017). What is 'effective' CPD for contemporary physical education teachers? A Deweyan framework. *Sport, Education and Society*, 22(7), 799-811.
<https://doi.org/10.1080/13573322.2015.1083000>
- Beng, S. (2020). *Disclosable restructuring paper-Cambodia higher education improvement project-P162971*.

- <https://policycommons.net/artifacts/1268395/disclosable-restructuring-paper/1848263/>
- Bo, C. K., Chhinh, N., Seak, R., Sin, N., & Souk, S. (2018). *Teacher professional development in Cambodia: four models of professional development of teacher training centers, normal schools, schools supported by NGOs and New Generation Schools*.
- Bou, S., & Marcela, S. B. (2018, April 26). *New financing will support Cambodia in improving higher education for industrial development*.
<https://www.worldbank.org/en/news/press-release/2018/04/26/new-financing-will-support-cambodia-in-improving-higher-education-for-industrial-development>
- Burkhardt, J. A. (2009). *Rebuilding the education system in Cambodia one teacher training at a time*.
<http://www.defiance.edu/mcmaster/documents/journal-2009-14-rebuilding-edu-system.pdf>
- Corrado, R., & Tungjan, P. (2019). Teachers' motivation and quality education represent the key for the change in Cambodia. *TICC International Conference Proceedings*. 4th Thailand International College Consortium Conference, Pattaya, Chonburi, Thailand.
<http://ticc2019.buu.ac.th/Doc/The%204th%20Thailand%20International%20College%20Consortium%20E-Proceedings.pdf>
- Doeur, B. (2022). *Significance of professional development: Implications for Cambodian teachers*. Cambodia Development Center. <https://cd-center.org/significance-of-professional-development-implications-for-cambodian-teachers/>
- Eam, P. (2022). A Consideration of academic research education, training, and development model at Cambodian higher education institutions. In P. Eam, P. Leng, S. Khieng, & S. Song (Eds.), *Cambodian post-secondary education and training in the global knowledge societies* (pp. 114-144). Cambodia Development Resource Institute.
https://cdri.org.kh/storage/pdf/Cambodian%20PSET%20in%20the%20Global%20Knowledge%20Societies_1648631240.pdf#page=138
- Eather, N., Mavilidi, M. F., Sharp, H., & Parkes, R. (2022). Programmes targeting student retention/success and satisfaction/experience in higher education: A systematic review. *Journal of Higher Education Policy and Management*, 44(3), 223-239.
<https://doi.org/10.1080/1360080X.2021.2021600>

- Ebrahim, P., Al-Moumni, M., Al-Hattami, A., & Ali, A. (2021). A study of student attrition in the foundation year program of a teachers' college. *International Journal of Lifelong Education*, 40(3), 198-214. <https://doi.org/10.1080/02601370.2021.1931973>
- Fang, T., Wang, L. Y., Lin, T. B., & Huang, C. K. (2022). To stay or leave: A multiple-case study of the retention of native English-speaking teachers in Taiwan. *Asia Pacific Education Review*, 23, 325-340. <https://doi.org/10.1007/s12564-022-09756-7>
- Fergusson, L. C., & Masson, G. L. (1997). A culture under siege: Post-colonial higher education and teacher education in Cambodia from 1953 to 1979. *History of Education*, 26(1), 91-112. <https://doi.org/10.1080/0046760970260106>
- Ford, D. (2006). Cambodian higher education growing pains. *International Higher Education*, (44), 10-11. <https://doi.org/10.6017/ihe.2006.44.7912>
- Heng, K. (2020a, 24 October). *Post-pandemic, higher education reform is the priority*. University World News. <https://www.universityworldnews.com/post.php?story=20201020094948838>
- Heng, K. (2020b). *Stakeholder collaboration: The key to promoting academic research in Cambodia*. Cambodia Development Center. <https://cd-center.org/stakeholder-collaboration-the-key-to-promoting-academic-research-in-cambodia/>
- Heng, K., Hamid, M. O., & Khan, A. (2022). Research engagement of academics in the Global South: The case of Cambodian academics. *Globalisation, Societies and Education*, 1-16. <https://doi.org/10.1080/14767724.2022.2040355>
- Heng, K., & Sol, K. (2022). Education: Key to making Cambodia great again. *Cambodia Development Center*, 4(3), 1-18. <https://cd-center.org/education-key-to-making-cambodia-great-again/>
- Holmes, A. (2020). What are the barriers and opportunities for continuing professional development for professional services staff in UK HE? *Perspectives: Policy and Practice in Higher Education*, 24(3), 79-86. <https://doi.org/10.1080/13603108.2020.1750501>
- King, E. F. (2018a). CFS policy and Cambodian teacher education and training: Beeby revisited. *International Education Journal: Comparative Perspectives*, 17(2), 16-29. <https://files.eric.ed.gov/fulltext/EJ1183976.pdf>

- King, E. F. (2018b). Developing teacher capacity in Cambodia: An expanded model. *Asian Education and Development Studies*, 7(1), 2-14.
<https://doi.org/10.1108/AEDS-06-2017-0053>
- King, J., & South, J. (2017). *Reimagining the role of technology in higher education: A supplement to the national education technology plan*.
<https://static.politico.com/20/ac/688279f247f695c1ea2c37063fc8/obama-administration-outlines-recommendations-for-using-technology-in-higher-education.05%5B1%5D%20copy.pdf>
- Kitamura, Y. (2016). Higher education in Cambodia: Challenges to promote greater access and higher quality. In C. S. Collins, M. N. Lee, J. N. Hawkins, & D. E. Neubauer (Eds.), *The Palgrave handbook of Asia Pacific higher education* (pp. 365-380). Springer.
https://doi.org/https://doi.org/10.1057/978-1-137-48739-1_24
- Kov, P. (2022). The education systems in Cambodia and Thailand: A comparative perspective. In K. Heng, K. Sol, C. Hum, S. Yen, & S. Ren (Eds.), *Critical issues in Cambodian education: Insights from youth* (pp. 23-35). Cambodian Education Forum.
https://drive.google.com/file/d/1qfo_PqIt77WTtvvtOdbYCUVrL_Tv602O/view
- Leng, P. (2022). Internationalisation of Cambodian higher education: Trends and challenges. In P. Eam, P. Leng, S. Khieng, & S. Song (Eds.), *Cambodian post-secondary education and training in the global knowledge societies* (pp. 61-83). Cambodia Development Resource Center.
https://cdri.org.kh/storage/pdf/Cambodian%20PSET%20in%20the%20Global%20Knowledge%20Societies_1648631240.pdf#page=85
- MacNeil, D. J. (2004). *School and cluster-based teacher professional development: bringing teacher learning to the schools*.
https://pdf.usaid.gov/pdf_docs/Pnadd972.pdf
- Meak, C. (2021). A study of conceptual framework and desirable state of teacher career pathway in Cambodia based on authentic student achievement. *Educational Management and Innovation Journal*, 4(2), 1-23.
<https://fliphtml5.com/zrnto/cgbl/basic>
- Milton, S. (2013). *The neglected pillar of recovery: A study of higher education in post-war Iraq and Libya*. [PhD Thesis, The University of York].
<https://etheses.whiterose.ac.uk/5207/>
- MoEYS. (2019). *Continuous professional development framework for teachers and school directors*.

- http://cpd.moeys.gov.kh/documents/1635838377_cpd_framework_en.pdf
- MoEYS. (2022). *Education congress: The education, youth and sport performance in the academic year 2020-2021 and goals for the academic year 2021-2022*. <http://www.moeys.gov.kh/index.php/kh/education-congress-2020/reports/4337.html#.YpIfsihBzIV>
- Roesken-Winter, B., Schöler, S., Stahnke, R., & Blömeke, S. (2015). Effective CPD on a large scale: examining the development of multipliers. *ZDM Mathematics Education*, 47(1), 13-25. <https://link.springer.com/article/10.1007/s11858-014-0644-5>
- Ros, V., & Oleksiyenko, A. (2018). Policy misalignments and development challenges in the Cambodian academic profession: Insights from public university lecturers. *Higher Education Policy*, 31(1), 19-35. <https://link.springer.com/article/10.1057/s41307-017-0043-y>
- Ros, V., & Sol, K. (2021). The quest for world-class universities: A goal for Cambodian universities? *Cambodian Journal of Educational Research*, 1(2), 24-40. <https://drive.google.com/file/d/1Bc8LukQZHKfE5-1YXAnCazzqqTkaqilF/view>
- Sam, R., Zain, A. N. M., & Jamil, H. (2012). Cambodia's higher education development in historical perspectives (1863-2012). *International Journal of Learning and Development*, 2(2), 224-241. <https://doi.org/10.5296/ijld.v2i2.1670>
- Sot, V., Chey, C. O., & Chhinh, S. (2022). The teaching profession in Cambodia: Progress to date and ongoing needs. In McNamara, V., Hayden, M. (Eds.), *Education in the Asia-Pacific Region: Issues, concerns and prospects*, (Vol 64, pp. 115-132). Springer. https://doi.org/10.1007/978-981-16-8213-1_7
- The Asean Post. (2020, May 10). *Is Cambodia's education system corrupted?* <https://theaseanpost.com/article/cambodias-education-system-corrupted>
- The Phnom Penh Post. [Post Staff] (2020). *Education ministry's reform strategies to improve the quality of teachers*. <https://www.phnompenhpost.com/national/education-ministrys-reform-strategies-improve-quality-teachers>
- Tinio, V., Lim, C. P., & Modesto, J. (2022). *Supporting teacher professional development at scale: Final technical report*. <https://idl-bnc->

- idrc.dspace.org/bitstream/handle/10625/61003/IDL%20-%2061003.pdf
- Tithsatya, D. (2017). Higher education in Cambodia: Current situation, problems and solutions. *Global Journal for Research Analysis*, 6(6), 339-342.
https://globaljournalforresearchanalysis.com/file.php?val=June_2017_1498819305__155.pdf
- Tolbert, D. A. (2018). *To reform or not to reform: Cambodian beliefs and attitudes toward education reform and changes to their national grade 12 examination*. [Honors thesis, Texas State University].
<https://digital.library.txstate.edu/bitstream/handle/10877/7825/Tolbert-Desereah-Thesis.pdf?sequence=1>
- Vann, M. (2012). *Stakeholders' perceptions of quality in Cambodian higher education*. [PhD Thesis, RMIT University].
<https://researchrepository.rmit.edu.au/esploro/outputs/doctoral/Stakeholders-perceptions-of-quality-in-Cambodian-higher-education>
- Un, L., & Sok, S. (2018). Higher education systems and institutions, Cambodia. In: *Encyclopedia of international higher education systems and institutions* (pp. 1-10). Springer. https://doi.org/10.1007/978-94-017-9553-1_500-1
- Vanzin, I. (2021, February 2). Instituting school-based support for Cambodia's early grade teachers. *GPE 20 Years: Transforming Education*.
<https://www.globalpartnership.org/blog/instituting-school-based-support-cambodias-early-grade-teachers>
- Wallace, S., & May, S. (2016). Assessing and enhancing quality through outcomes-based continuing professional development (CPD): A review of current practice. *Veterinary Record*, 179(20), 515-520.
<https://bvajournals.onlinelibrary.wiley.com/doi/pdf/10.1136/vr.103862>
- Waters, L. (2021). Positive education pedagogy: Shifting teacher mindsets, practice, and language to make wellbeing visible in classrooms. In M. L. Kern & M. L. Wehmeyer (Eds.), *The Palgrave handbook of positive education* (pp. 137-164). Palgrave Macmillan.
https://link.springer.com/chapter/10.1007/978-3-030-64537-3_6
- Zhang, M. (1998). Cambodian reforms in higher education finance. *International Higher Education*, 11, 8-8.
<https://doi.org/10.6017/ihe.1998.11.6426>

English proficiency: Key to educational opportunities for Cambodian students

Kimcheng Ngel

Cambodian Education Forum

Phnom Penh, Cambodia

Abstract

Cambodia has experienced some changes in the foreign language landscape in its recent history before having English as the most popular foreign language at present. However, research has shown that the English proficiency of Cambodians is low, which is troubling considering the role of English in educational opportunities. This article provides a brief historical background of foreign languages in Cambodia and explains how English opens doors to educational opportunities as it is the language of the internet and the Massive Open Online Courses. Moreover, as a global lingua franca, English serves as a language for overseas educational opportunities and research and publication. The article concludes with a word of caution regarding the embrace of English and the need to preserve the Khmer language.

Keywords: English; English proficiency; educational opportunities; Cambodian students

ARTICLE HISTORY

Received 21 January 2022

Accepted 1 April 2022

Introduction

Cambodia has had a somewhat turbulent relationship with foreign languages in its recent history. Mao (2015) provided an overview of the historical context of foreign languages in Cambodia. During the French colonization (1863-1953) and the few decades after that, the main foreign language in Cambodia was, not surprisingly, French. When the Khmer Rouge took control of the country from 1975-1979, the whole educational system was practically destroyed. Ledgerwood (1990) stated that around 80% of written works in Khmer were deliberately ruined. The destruction was not just limited to books; intellectuals were also one of their main targets for mass killing (Quackenbush, 2019). Chigas and Mosyakoy (n.d.) noted that the Khmer Rouge aimed to eradicate the traces of what they considered Cambodia's imperialist past. The ability to speak French would associate a person with the education of the past colonial regime. Therefore, they were the target for execution. According to Filippi (2011), during this dark period, schools were all closed, and teachers were being criminalized. As a result, many teachers did not survive this brutal regime. Following the collapse of the Khmer Rouge, the People's Republic of Kampuchea (1979-1989) mainly rebuilt the education system based on the Vietnamese model which introduced Vietnamese and Russian into the education system (Martin, 1986, as cited in Neau, 2003).

According to Mao (2015), it was only until 1989 that Cambodia started to include the teaching of English in its education system, albeit with awfully scarce resources, as there were no curriculums, textbooks, and enough teachers of English at the time. From the early 1990s to the present time, English and French are the official foreign languages taught in schools; however, English has become the most popular foreign language of choice for Cambodian students (Mao, 2015).

Despite the embrace of English, the English proficiency in Cambodia is very low, ranked 97th out of 112 countries globally and 21st out of 24 Asian countries surveyed (EF Education First, 2021). This rank is only slightly better than Thailand (ranked 100th globally) but far behind Vietnam (66th) (EF Education First, 2021). Cambodia's low English proficiency level is concerning as there is a great need for the use of English for various opportunities, including but not limited to professional, recreational, and educational possibilities.

This article discusses how English serves as the key to educational opportunities because of its status as the language of the internet and the medium of instruction for Massive Online Open Courses. The article also looks at the role of English as the language for overseas education and research and publication. The article concludes with a word of caution concerning the need to preserve the Khmer language in the midst of the popularity of English.

English as the language of the internet

English is the language of the internet. The internet is the gateway to information and knowledge. There are all kinds of educational content available online, from inspiring stories on TED Talks to math and science lessons on Khan Academy, and the number of books available online on websites such as the Internet Archive is more than any physical library could ever hold. In a joint report between the Ministry of Education, Youth and Sport (MoEYS) of Cambodia and the Organisation for Economic Co-operation and Development (OECD), one of the suggestions for quick and impactful intervention to improve Cambodian students' academic achievement is to create extra learning opportunities for them (MoEYS, 2018). If there is enough guidance or instruction from teachers, the educational resources available on the internet could be the answer for Cambodia to overcome the challenges of having limited educational resources. Moreover, as over 60% of the websites on the internet are in English (Bhutada, 2021), knowledge of English is essential. With good English proficiency, Cambodian students will be able to access learning resources online and use the internet as an essential educational tool.

According to The Phnom Penh Post (2021), Cambodia has one of the highest mobile penetrations in the world, with 20.8 million mobile connections (i.e., 124% of the population), and 10.7 million of those mobile connections are smartphones connected to the internet. Cambodia also has one of the youngest populations, with a median age of 25 (The Phnom Penh Post, 2021). As the young generation is widely known as being tech-savvy, navigating the internet for educational content would be within their forte. The COVID-19 pandemic has shown us the potential of digital education. In a joint needs assessment, it was found that the greatest hindrance to distance learning for Cambodian students during the pandemic was neither the ability to use technology nor the

internet but rather the lack of funds to pay for the technology or equipment to access online learning (MoEYS & The Education Sector Working Group, 2021).

English for Massive Open Online Courses (MOOCs)

Social distancing has limited many face-to-face learning opportunities; however, that does not mean education or professional development has to be halted. The rise of online learning all over the world, including in Cambodia, is the result of the COVID-19 pandemic. Many schools and universities in Cambodia have been scrambling to turn their classes online. Even the Education Ministry is working hard to provide distance learning resources such as mobile applications and video lessons to students (Heng, 2021; Khmer Times, 2021; Tum, 2020;). While many students might not be familiar with online learning in the past, the current pandemic has introduced them to digital education, allowing them to be more familiar with online learning.

While English is essential for online learning, it is even more important for accessing the Massive Open Online Courses (MOOCs). MOOCs are online learning courses that are available for free to the public or anyone with access to the internet (The Oxford Review, 2020). Many universities, including some of the top universities in the world, such as Harvard University, Massachusetts Institute of Technology, University of Cambridge, and Stanford University, offer MOOCs classes. It is a flexible and free way to acquire new skills virtually in almost every subject. MOOCs were already quite sensational even before the pandemic. It is expected that their popularity will grow even more due to the impact of the pandemic. Because of the quality content and accessibility, one can still continue to benefit from MOOCs courses even after the pandemic. Even if they may not completely replace formal face-to-face education, they could still be great educational resources, especially for students in countries with limited online educational content, such as Cambodia.

However, MOOCs are not for everyone. Students with limited English ability will find it difficult, if not impossible, to access them. For example, on Class Central, a search engine and review site for MOOCs, nearly 90% of the MOOCs courses available on this search engine site are offered in English (Class Central, 2022). This corresponds with data in an Insider Higher Ed article stating that two of the most popular MOOCs providers, namely Coursera and edX, have

English as the language of instruction for over 80% of their courses (Agudo, 2019). A study by Finardi and Tyler (2015) also suggested that English proficiency is necessary to reap most of the benefits that MOOCs provide. In this sense, Cambodian students should not let the lack of English language proficiency be an obstacle to accessing these valuable educational resources. They need to try to improve their English proficiency.

English for educational opportunities abroad

Cambodia's education still has a lot to improve. Hence, going abroad may be a valuable opportunity to further one's education, but possessing a high English proficiency appears to be a prerequisite for an overseas academic journey. For example, in the QS World University Rankings 2022, nine of the top 10 universities in the world are in English-speaking countries. Moreover, 16 of the top 20 universities are in countries that have English as their official language (Quacquarelli Symonds, 2022). Besides, even if a student wishes to study at universities in countries whose official language is not English, the chances are that English would still be useful. According to Breen (2019), while around 400 million speakers learn English as a first language, there are approximately 1.5 billion English speakers. Thus, English is solidifying its position as the global lingua franca, a language spoken between people from different nations even if it is not even their native language (Abdullah & Chaudhary, 2012).

Even though studying abroad is a dream for many, not everyone can afford it. Fortunately, there are scholarships available for this very reason. However, many scholarships expect a certain level of English competence in addition to skills and experience. For example, some of the most prestigious fully-funded scholarships annually available to Cambodian people, such as the Fulbright Foreign Student Program and Australia Awards Scholarships, have English proficiency requirements. For the 2023-2024 intake, the Fulbright Scholarship requires a minimum of 88 on the internet-based TOEFL (Test of English as a Foreign Language) or 7.0 on IELTS (International English Language Testing System), whereas for the Australia Awards Scholarships, Masters by coursework applicants must have at least 60 on internet-based TOEFL or IELTS Academic result with an overall score of at least 6.0, with no band less than 5.5 to be eligible to apply. For a masters by research, the same scholarship requires applicants to have at least 79 on internet-based TOEFL or IELTS Academic with

an overall score of at least 6.5 with no band less than 6.0. Thus, without having a certain level of command in English, it will be much more difficult to find a scholarship to study abroad.

English for research and publication

Research is an important part of students' academic endeavors. It helps students with writing essays for classes or something more significant such as a thesis or dissertation. As students venture through their academic journey, it is inevitable that they will be obliged to do some research or at least read some research articles. Cambodia, unfortunately, is lagging behind many countries when it comes to research performance. Of the ten countries in ASEAN, Cambodia is ranked 8th in terms of the number of publications indexed in the Scopus database (Heng, 2021; Heng et al., 2020). In 2013, the Voice of America (VOA) stated that research is not prioritized in Cambodia. The country invested so little in research that the World Bank did not even rank it (Khoun, 2013).

Fortunately, there have been some positive developments in recent years (see Heng, 2020b; Heng & Sol, 2021). For example, there are some new research journals for Cambodian researchers, such as the Cambodia Education Review (published by MoEYS); Insight: The Cambodia Journal of Basic and Applied Research (Royal University of Phnom Penh), the Cambodia Journal of Public Health (National Institute of Public Health of Cambodia), the Cambodian Journal of Educational Development (Hiroshima University and Cambodia's Japan International Cooperation Center), and the Cambodian Journal of Educational Research (Cambodian Education Forum) (see Heng & Sol, 2021, p. 10). Even if the number of articles published in these journals is still limited, it is great to see such progress. Nevertheless, almost all the articles published in these journals are still in English. This means that the English language use in the Cambodian academic sphere is quite prominent.

Considering the academic nature of research, one would need to be proficient in English to fully comprehend the content published and even more so to write and publish research in English. Furthermore, English has been the language of choice for many international scholarly journals. According to Curry and Lillis (2018), around 27,000 journals included in the Web of Science are mostly published in English. Even if more than 9,000 peer-reviewed scholarly journals

are being published in other languages, with the highest contribution being French, German, Spanish, and Chinese, most of them are not included in prestigious journal indexes. This clearly shows that English is the global lingua franca of the academic world (Curry & Lillis, 2018). Therefore, to read various research or published findings, whether in local or international journals, one needs to be proficient in English.

Concluding remarks

English can bring immense educational benefits by allowing students to make use of a wide variety of educational content offline and online. It provides them with the chance to further their education abroad and pursue their research endeavors. With such a strong foothold, English is unlikely to dwindle in the foreseeable future. Cambodian students should therefore work hard to improve their English proficiency to reap all these advantages. On the other hand, students also need to take caution in preserving their own language and not neglect it. Despite Cambodia's limited proficiency in English discussed above, there is seemingly a contradictory report on how some of the younger generations of Cambodians, albeit being Cambodian natives, struggle with Khmer and appear to be more competent in English (see An & Mom, 2020; Heng, 2020a). This inconsistency might be linked to the disparity between people of different socioeconomic or geographic backgrounds. For instance, there are many more international schools in Phnom Penh, the capital city, compared to other provinces. This suggests an alarming development.

Although being fluent in English might bring the aforementioned rewards, the loss of one's language is detrimental to one's identity and culture. If we lose our own language, we will not only risk losing our culture but also our social bonds and networks, which will in turn affect our social, mental, and physical well-being (Dastgoshadeh & Jalilzadeh, 2011). Hence, we need to be careful to prevent language loss to avoid these negative consequences. Even if English is important, Khmer should not be neglected.

The reason for the need for English regarding educational opportunities is largely due to the fact that Cambodia lacks high-quality educational resources. This can be attributed to the brutal Khmer Rouge regime and the combination of a weak reading culture along with the problems of piracy and limited

protection of copyright of books, which demotivates many Cambodian authors from publishing (Duncan, 2021; Ellen, 2013). This makes it even more difficult to recoup the loss of that wisdom. While the legacy of the Khmer Rouge remains even now, we must try our best to recover our wealth of knowledge, both written and unwritten. With that mindset and vision, even if we are embracing English as a vehicle for educational opportunities, we need to also work hard to rectify what we are lacking: well-made educational content in our very own language, Khmer.

Acknowledgments

The author would like to express appreciation to Mr. Kimkong Heng and Mr. Koemhong Sol, Co-Editors-in-Chief of the Cambodian Education Forum, and the two anonymous reviewers for their comments, suggestions, and assistance in improving this article.

The author

Kimcheng Ngel is currently an English teacher at the Australian Centre for Education (ACE) and a research intern at the Cambodian Education Forum (CEF). She has been teaching English since 2018. She holds a B.Ed in Teaching English as a Foreign Language (TEFL) from the Institute of Foreign Languages, Royal University of Phnom Penh. Her areas of professional interest lie in learners' autonomy, lifelong learning, and digital education.

Email: ngelkimcheng@gmail.com

References

- Abdullah, S., & Chaudhary, M. (2012, December). *English as a global lingua franca* [Paper presentation]. International Conference on Education, Applied Sciences and Management (ICEASM'2012), Dubai, United Arab Emirates
<https://psrcentre.org/images/extraimages/27.%201412116.pdf>
- Agudo, R. (2019, January 9). *MOOCs' overwhelming dependence on English limits their impact (opinion)*. Inside Higher Ed.
<https://www.insidehighered.com/digital->

- learning/views/2019/01/09/moocs-overwhelming-dependence-english-limits-their-impact-opinion
- An, K., & Mom, S. (2020, January 10). *Fluent in English, awkward in Khmer: A generation is growing up with a mixed bag of language skills*. Newsroom Cambodia. <https://newsroomcambodia.com/en/2020/01/10/fluent-in-english-awkward-in-khmer-a-generation-is-growing-up-with-a-mixed-bag-of-language-skills/>
- Bhutada, G. (2021, March 26). *Visualizing the most used languages on the internet*. Visual Capitalist. <https://www.visualcapitalist.com/the-most-used-languages-on-the-internet/>
- Breene, K. (2019, November 15). *Which countries are best at English as a second language?* World Economic Forum. <https://www.weforum.org/agenda/2019/11/countries-that-speak-english-as-a-second-language/>
- Chigas, G., & Mosyakov, D. (n.d.). *Literacy and education under the Khmer Rouge*. Yale University Genocide Studies Program. <https://gsp.yale.edu/literacy-and-education-under-khmer-rouge>
- Class Central. (2020). *About Class Central*. <https://www.classcentral.com/about>
- Curry, M. J., & Lillis, T. (2018, March 13). *The domination of English-language journal publishing is hurting scholarship in many countries (opinion)*. Inside Higher Ed. www.insidehighered.com/views/2018/03/13/domination-english-language-journal-publishing-hurting-scholarship-many-countries
- Dastgoshadeh, A., & Jalilzadeh, K. (2011). Language loss, identity, and English as an international language. *European Journal of Social Sciences*, 21(4), 659-665. https://www.researchgate.net/publication/289304322_Language_loss_identity_and_English_as_an_international_language
- Duncan, K. (2021, March 18). *Once a necessity, book piracy today holds Cambodian literature back*. Southeast Asia Globe. <https://southeastasiaglobe.com/book-piracy-cambodia/>
- EF Education First. (2021). *EF English proficiency index*. <https://www.ef.com/wwen/epi/regions/asia/cambodia/>
- Ellen, R. (2013, June 27). *Book bound: publishing trap*. The Phnom Penh Post. <https://www.phnompenhpost.com/7days/book-bound-publishing-trap>

- Filippi, J. (2011, June 17). *Cambodia's turbulent educational history*. The Phnom Penh Post. <https://www.phnompenhpost.com/post-plus/cambodias-turbulent-educational-history>
- Finardi, K., & Tyler, J. (2015). *The role of English and technology in the internationalization of education: Insights from the analysis of MOOCs* [Paper presentation]. 7th International Conference on Education and New Learning Technologies, Barcelona, Spain.
- Heng, K. (2020a, November 7). *Embracing English while preserving Khmer identity*. Cambodian Education Forum. <https://cefcambodia.com/2020/11/07/embracing-english-while-preserving-khmer-identity/>
- Heng, K. (2020b). *New hope for a research culture in Cambodia*. Cambodia Development Center. <https://cd-center.org/2020/10/23/new-hope-for-a-research-culture-in-cambodia/>
- Heng, K. (2021). *Steps to promote academic research in Cambodia*. Cambodia Development Center. <https://cd-center.org/2021/03/13/steps-to-promote-academic-research-in-cambodia/>
- Heng, K., & Sol, K. (2021). Academic research in Cambodia: Progress, challenges, and ways forward. *Cambodian Journal of Educational Research*, 1(2), 6-23. <https://cefcambodia.com/2021/12/30/academic-research-in-cambodia-progress-challenges-and-ways-forward>
- Heng, K., Sol, K., Kaing, S., & Ros, V. (2020). Introduction: the need to promote a strong research and publication culture in Cambodia. In K. Heng, S. Kaing, V. Ros, & K. Sol (Eds.), *English Language Teaching, education, and online learning in Cambodia during COVID-19: Perspectives from practitioners and researchers* (pp. 1-10). Cambodian Education Forum. <https://cefcambodia.com/2020/12/29/english-language-teaching-education-and-online-learning-in-cambodia-during-covid-19/>
- Khoun, T. (2013, April 10). *Cambodia lacks research enough to tackle its problems, analysts say*. VOA Cambodia. <https://www.voacambodia.com/a/cambodia-lacks-research-enough-to-tackle-its-problems-analysts-say/1638656.html>
- Ledgerwood, J. (1990, September). *A building full of books*. Cultural Survival Quarterly Magazine. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/building-full-books>

- Mao, S. (2015). Education and policy on English language in Cambodia. In T. W. Bigalke & S. Sharbawi (Eds.), *English for ASEAN integration: Policies and practices in the region* (pp. 22-31). Universiti Brunei Darussalam.
<https://silotips.com/download/chapter-12-education-and-policy-on-english-language-in-cambodia>
- MoEYS, & The Education Sector Working Group. (2021). *Needs assessment helps to understand the impact of COVID-19 on education stakeholders*. UNICEF. <https://www.unicef.org/cambodia/reports/needs-assessment-helps-understand-impact-covid-19-education-stakeholders>
- MoEYS. (2018). *Education in Cambodia: Findings from Cambodia's experience in PISA for development*. <https://www.oecd.org/pisa/pisa-for-development/PISA-D%20national%20report%20for%20Cambodia.pdf>
- Neau, V. (2003). The teaching of foreign languages in Cambodia: A historical perspective. *Language, Culture and Curriculum*, 16(3), 253-268.
<https://doi.org/10.1080/07908310308666673>
- Khmer Times. (2021, May 8). *Official launch of a self-learning mobile application*. <https://www.khmertimeskh.com/50853462/official-launch-of-a-self-learning-mobile-application/>
- Quackenbush, C. (2019, January 7). *40 years after the fall of the Khmer Rouge, Cambodia still grapples with Pol Pot's brutal legacy*. The Times.
<https://time.com/5486460/pol-pot-cambodia-1979/>
- Quacquarelli Symonds. (2022). *QS World University Rankings 2022*. <https://www.topuniversities.com/university-rankings/world-university-rankings/2022>
- The Oxford Review. (2020, April 16). *MOOCs, cMOOCs and xMOOCs: Definition and explanation*. <https://oxford-review.com/oxford-review-encyclopaedia-terms/moocs-cmoocs-and-xmoocs-definition-and-explanation/>
- The Phnom Penh Post. (2021, June 30). *Cambodia's digital economy*. <https://phnompenhpost.com/financial/cambodias-digital-economy>
- Tum, M. (2020, April 23). *Education ministry pushes for online classes, as school closures extended*. VOA Cambodia.
<https://www.voacambodia.com/a/education-ministry-pushes-for-online-classes-as-school-closures-extended/5388208.html>

Digital transformation in higher education: Key to enhancing Cambodia's higher education sector

Kimkong Heng

*Cambodian Education Forum
Phnom Penh, Cambodia*

Bunhorn Dœur

*University of Southern Queensland
Toowoomba, Australia*

Abstract

The COVID-19 pandemic has accelerated digital transformation in higher education in Cambodia. This phenomenon provides a great opportunity for Cambodian higher education to transform and enhance the integration of information and communication technology (ICT) in the classroom. This article discusses how digital transformation in higher education can improve Cambodian higher education by bringing at least three benefits to the sector, namely increased opportunities for blended learning, better adoption of ICT in education, and greater opportunities for institutional collaboration. The article calls for concerted efforts to build on this momentum and makes recommendations for concerned stakeholders in Cambodian higher education to support higher education digitalization. The article concludes with suggestions for future research.

Keywords: Digital transformation; higher education; COVID-19; Cambodia

ARTICLE HISTORY

Received 16 May 2022

Accepted 2 June 2022

Introduction

In Cambodia, the COVID-19 pandemic started to cause significant disruption in March 2020 when all schools and universities were ordered to close temporarily. Although Cambodia coped with the pandemic relatively well in 2020 (see Heng 2020a, Heng & Ang, 2020), there was an extensive community transmission in February 2021. Since then, the rate of infections jumped to between 300-800 cases per day. Deaths related to COVID-19 started to kick in and got more serious. By May 2022, Cambodia recorded 136,254 confirmed cases of COVID-19 and 3,056 deaths (World Health Organization, 2022). As of June 2, 2022, Cambodia recorded no new COVID-19 infection for 27 consecutive days. Now many business activities have almost got back to the pre-pandemic situation with some health restrictions and social distancing requirements. However, some educational institutions continue to offer classes online and embrace the opportunities for online and blended learning (a combination of physical and online classes) accelerated by the pandemic (see Chea et al., 2020; Heng, 2021a).

Despite the disruptions and COVID-19-related challenges, the pandemic has ushered in an unprecedented opportunity to introduce digital transformation in education, particularly higher education (see Chea et al., 2020; Heng, 2020b, 2021a; Heng & Sol, 2021). Prior to the pandemic, online classes were not a normal thing in Cambodia, so was blended learning. On-campus learning was the norm, and few educational institutions were keen on investing in online learning resources and the Learning Management System (LMS).

However, over two years into the pandemic, everything has changed and gone online. Online learning, meetings, workshops, and seminars have become ubiquitous in educational and non-educational settings. Students and teachers have increasingly gotten accustomed to them. Schools and universities in Cambodia can now provide online classes with greater confidence and effectiveness. Educational administrators and leaders have gained a better understanding of online and blended learning delivery and are more willing to introduce change to their pre-pandemic education provision (see Heng 2021a; Heng & Sol, 2021).

Against this backdrop, this article aims to discuss the digital transformation in

Cambodian higher education driven by the COVID-19 pandemic. The article argues that the digital transformation in higher education, despite its temporality, is key to enhancing the Cambodian higher education sector, particularly in terms of enhancing the integration of information and communication technology (ICT) and blended learning into mainstream classrooms. The article discusses three reasons to substantiate this argument. It concludes with recommendations for concerned stakeholders in Cambodian higher education and for future research.

How can digital transformation enhance Cambodian higher education?

Digital transformation is defined as “a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies” (Vial, 2019, p. 9). It involves “the use of new digital technologies (social media, mobile, analytics or embedded devices) to enable major business improvements (such as enhancing customer experience, streamlining operations or creating new business models” (Fitzgerald et al., 2014, p. 2).

The phenomenon of digital transformation in higher education driven by the pandemic provides a great opportunity for transformation in Cambodian higher education. The whole sector is seen to benefit from the pandemic-induced digitalization in many ways, three of which are discussed below.

Increased opportunities for blended learning

The pandemic-induced digital transformation of education provides a great opportunity for higher education institutions (HEIs) in Cambodia to improve their learning management system and promote blended learning (Heng, 2021a). They become more familiar with online education provision and management. They have somehow invested in infrastructure to support online learning and teaching. The experience and resources for online learning during COVID-19 are essential for the greater integration of blended learning into mainstream classes (see Heng, 2021a).

Prior to the pandemic, blended learning was a new phenomenon in Cambodian higher education. Most, if not all, classes were offered in a face-to-face format.

It was not common for students to stay home and access educational content online. Everyone was supposed or generally required to attend classes on campus and be present during class sessions. The situation has changed since the outbreak of COVID-19 that hit Cambodia in early 2020 (see Chet et al.; 2022; Heng & Sol, 2021; Soeung & Chim, 2022 for recent discussions of how COVID-19 has influenced the adoption of online or blended learning in Cambodian education). Although the pandemic has now eased, some classes are offered in a hybrid mode – a combination of online and physical classes. Therefore, there are more opportunities for blended learning in higher education in Cambodia. As Heng and Sol (2021) argued, due to the pandemic, “online learning in Cambodia has gained remarkable momentum as an alternative to face-to-face teaching and learning, allowing education to continue for students” (p. 38).

Better adoption of information and communication technology

The pandemic has served as a catalyst for the greater adoption of ICT in higher education in Cambodia (see Heng, 2021a). In line with the trend toward blended learning, there is an increased use of ICT to facilitate learning and teaching. More university students and teachers in Cambodia are familiar with online learning applications such as Google Classroom, Google Meet, Microsoft Teams, Quizlet, Kahoot, Zoom, and so on (see Chea et al., 2020; Chet et al., 2022; Doeur, 2021). Although research pointed to the challenges Cambodian students faced in continuing their education through online learning (see Chea et al., 2020; Chet et al., 2022; Eam, 2021; Soeung & Chim, 2022), there is no doubt that students have experienced, in one way or another, different online learning platforms and tools while engaging in online learning during the pandemic. This gives them confidence and familiarity in using technology to facilitate their learning even after the pandemic.

The accumulated knowledge and experience in using online learning applications are crucial for fostering positive attitudes toward online learning and teaching. Even though research has indicated that many Cambodian students, whether in secondary school or higher education, wished to return to study in a pre-pandemic condition (see, for example, Chet et al., 2022), there is no way of turning back. Online learning has become too ubiquitous to ignore, and the adoption of ICT in education has never been greater. As Heng (2020b) noted:

The experience of designing and conducting lessons and classes remotely or electronically is invaluable. The insights gained from such ad hoc initiatives and experiences will have a positive impact on the assumptions, beliefs and attitudes towards e-learning and blended learning both in schools and universities. (p. 4)

Therefore, with the rise of online learning (see Li & Lalani, 2020), the adoption of online or blended learning in higher education will increase, which will in turn promote the digital transformation in higher education, particularly in developing countries such as Cambodia where there was limited integration of ICT in education prior to the pandemic.

Greater opportunities for institutional collaboration

There are also increased opportunities for institutional collaboration. The collaboration can be both locally and internationally. Prior to the pandemic, different types of collaboration had been limited by geographical locations. However, the pandemic has lessened the geographical barriers as communication is conducted almost entirely online through emails and video calls. Since the start of the pandemic, for example, there has been a wide variety of opportunities for institutional collaboration for Cambodian HEIs and think tanks, particularly in the form of webinars, online workshops, and virtual conferences. Although institutional collaboration has been limited among Cambodian universities and between Cambodian and foreign universities (see Sok & Bunry, 2021), the experience during the pandemic will pave the way for more collaboration opportunities in various dimensions, including co-organization of webinars or online events.

In addition, there has been evidence of a greater public-private partnership. The Ministry of Education, Youth and Sport (MoEYS), for instance, has collaborated with both public and private HEIs, development partners, and the private sector to facilitate the continuation of education for Cambodian students during the pandemic (Heng, 2021a). Some Cambodian universities either begin or increase their collaborative activities with other institutions to find ways to enhance their online learning delivery. Others expand their partnerships with foreign partners or multinational organizations (see Heng, 2021b). The collaboration has gone beyond borders, providing Cambodian HEIs with

hands-on experience, skills, and connections that are essential for future collaboration. Given more collaboration opportunities with foreign partners, there is hope for higher education in Cambodia to accelerate its internationalization process and improve research collaboration and productivity.

Conclusion

This article has shown that the digital transformation in higher education is key to enhancing the higher education sector in Cambodia. The article discussed three positive points that Cambodian higher education could benefit from the pandemic-induced digital transformation in higher education. The benefits included (1) increased opportunities for blended learning, (2) better adoption of ICT in education, and (3) greater opportunities for institutional collaboration.

Overall, the pandemic has created a rare opportunity for Cambodian higher education to enhance the integration of ICT in mainstream classrooms. This is essential for embracing blended learning in higher education. The digital transformation in higher education can allow the sector to leapfrog to catch up with educational development in neighboring countries. In this sense, higher education digitalization facilitated by the fast-changing development in technology and the COVID-19 pandemic is a welcoming phenomenon that needs to be built upon. To this end, concerted efforts and attention from relevant stakeholders need to focus on supporting and accelerating the digital transformation in higher education to bring about greater integration of ICT and blended learning in Cambodian classrooms.

Recommendations

To build on this important momentum to expand the integration of ICT and blended learning in mainstream classrooms, the Cambodian government, through MoEYS, needs to increase investment in digital education to transform and internationalize Cambodian higher education. Systematic financial and technical support is, therefore, needed as it is essential for sustaining and increasing the ICT integration in the classroom beyond the pandemic.

Cambodian HEIs also have vital roles to play in enhancing the digital transformation in higher education. As Heng and Sol (2021) argued, Cambodian HEIs need to invest in LMS and be proactive in seeking support to accelerate the integration of ICT in the classroom. They also need to focus on capacity building for their administrative and academic staff to ensure that they are equipped with the necessary knowledge and skills to enhance the effectiveness of online class delivery.

Other stakeholders such as non-governmental organizations, donor agencies, and the private sector also play crucial roles in supporting the digital transformation in higher education. In addition to increasing their financial and technical support, they need to elevate their involvement in the form of collaboration and partnership with the government and educational institutions to enhance the quality of Cambodian higher education.

Meanwhile, university academics and students who are key players in higher education must exercise their agency and increase their actions to build their capacity and interest in life-long learning, teaching, and research. Once they are committed and driven by both intrinsic and extrinsic motivation, they will more likely contribute to fostering an environment conducive to teaching, research, and continuous professional development.

Given that the digital transformation in higher education in Cambodia is a new phenomenon and that research into this area is scarce, this article offers some suggestions for future research. First, future researchers may investigate how different stakeholders in Cambodian higher education perceive this phenomenon of higher education digital transformation. Such an understanding would be useful for policymaking and implementation needed to further enhance the higher education digitalization, which in turn contributes to improving higher education quality and internationalization.

Second, more research is needed to understand how blended learning is adopted and experienced by Cambodian HEIs, academic staff, and students. Large-scale surveys on how university teachers and administrators view the adoption of blended learning and how students think about blended learning are desirable. Findings from such surveys will shed light on how key higher education stakeholders think about blended learning and digital education.

They will also provide direction for policy formulation and implementation to transform education delivery in Cambodian higher education.

Finally, future research may examine the impact of the pandemic on higher education in Cambodia. It may be crucial to investigate how the pandemic has transformed or altered the way of teaching, learning, and management in higher education. What are the negative or positive consequences on higher education resulting from the pandemic? How does the pandemic shape Cambodian higher education, and how can we take advantage of the pandemic to enhance the quality of higher education in Cambodia? Answers to these questions may provide us with valuable insights and empirical evidence needed to move Cambodian higher education forward in order to make it more relevant and competitive in the global knowledge economy.

Acknowledgments

The authors would like to thank Mr. Koemhong Sol, Co-Editor-in-Chief of the Cambodian Education Forum, for his editorial support and the two anonymous reviewers for their helpful comments on an earlier version of this article.

The authors

Kimkong Heng is an Australia Awards scholar. He has recently submitted his PhD thesis to the School of Education at the University of Queensland, Australia. He is a Co-founder and Editor-in-Chief of the Cambodian Education Forum. He is also a Visiting Senior Research Fellow at the Cambodia Development Center and a PhD Fellow at the Cambodia Development Resource Institute. He has published extensively on Cambodia's social, political, and educational issues. His research interests include TESOL, research engagement, academic publishing, and higher education.

Email: kimkongheng@gmail.com

Bunhorn Doeur is a PhD candidate in TESOL at the University of Southern Queensland in Australia and a Guest Editor at the Cambodian Education Forum. He has a master's degree in TESOL from the University of Canberra, Australia. He has extensive experience in teaching English and coordinating English language programs in Cambodia. His research interests include

teachers' beliefs, students' perspectives, teacher education and teacher professional development.

Email: bunhorndoeur@gmail.com

References

- Chea, P., Hun, S., & Chheam, S. (2020). Disruption and opportunities during the Covid-19 pandemic in Cambodian higher education: Perspective from teaching staff. *Cambodia Development Review*, 24(4), 1-7.
https://cdri.org.kh/storage/pdf/cdr20-4e-1_1618299519_1631258714.pdf
- Chet, C., Sok, S., & Sou, V. (2022). The antecedents and consequences of study commitment to online learning at higher education institutions (HEIs) in Cambodia. *Sustainability*, 14(6), 1-43.
<https://doi.org/10.3390/su14063184>
- Doeur, B. (2021). The role of digital technology in English major programs in Cambodia. In K. Heng, S. Kaing, D. Kao, M. Muong, B. Doeur, & T. Lor (Eds.), *Online learning during COVID-19 and key issues in education* (pp. 62-72). Cambodian Education Forum.
<https://cefcambodia.com/2021/12/15/the-role-of-digital-technology-in-english-major-programs-in-cambodia/>
- Em, S. (2021). Challenges of online learning during the COVID-19 pandemic: A survey of Cambodian high school students. *Cambodian Journal of Educational Research*, 1(2), 96-108. <https://cefcambodia.com/cjer-volume-1-number-2/>
- Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013). Embracing digital technology: A new strategic imperative. *MIT Sloan Management Review*. <https://emergencweb.com/blog/wp-content/uploads/2013/10/embracing-digital-technology.pdf>
- Heng, K. (2020a, June 12). *Cambodia's COVID-19 success and economic challenges*. East Asia Forum.
<https://www.eastasiaforum.org/2020/06/12/cambodias-covid-19-success-andeconomic-challenges/>
- Heng, K. (2020b). COVID-19: A silver lining in the crisis for Cambodia's education sector. In K. Heng, S. Kaing, V. Ros, & K. Sol (Eds.), *English language teaching, education, and online learning in Cambodia during COVID-19: Perspectives from practitioners and researchers* (pp. 41-47).

- Cambodian Education Forum.
<https://cefcambodia.com/2020/12/29/english-language-teaching-education-and-online-learning-in-cambodia-during-covid-19/>
- Heng, K. (2021a). COVID-19: A catalyst for the digital transformation of Cambodian education. *ISEAS Perspective* No. 87.
https://www.iseas.edu.sg/wp-content/uploads/2021/06/ISEAS_Perspective_2021_87.pdf
- Heng, K. (2021b). Exploring the impacts of COVID-19 on education in Southeast Asia: Challenges and opportunities. In C. Pich & R. Hör (Eds.), *The impact of COVID-19 pandemic: National and regional implications* (pp. 166-177). Cambodian Institute for Cooperation and Peace (CICP) & Konrad-Adenauer-Stiftung (KAS) Cambodia.
<https://www.kas.de/en/web/kambodscha/single-title/-/content/the-impact-of-covid-19-pandemic-national-and-regional-implications>
- Heng, K., & Ang, L. (2020, July 8). *Who's helping Cambodia weather COVID-19?* The Diplomat. <https://thediplomat.com/2020/07/whos-helping-cambodia-weather-covid-19/>
- Heng, K., & Sol, K. (2021). COVID-19 and Cambodian higher education: Challenges and opportunities. In K. Heng, S. Kaing, D. Kao, M. Muong, B. Dœur, & T. Lor (Eds.), *Online learning during COVID-19 and key issues in education* (pp. 31-48). Cambodian Education Forum.
<https://cefcambodia.com/2021/12/15/covid-19-and-cambodian-higher-education-challenges-and-opportunities/>
- Li, C., & Lalani, F. (2020, April 29). *The rise of online learning during the COVID-19 pandemic*. World Economic Forum.
<https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>
- Soeung, S., & Chim, V. (2022). Cambodian teachers' perceptions of online teaching: During and beyond the COVID-19 pandemic. *FIRE: Forum for International Research in Education*, 7(3), 38-53. <https://fire-ojs-ttu.tdl.org/fire/index.php/FIRE/article/view/291>
- Sok, S., & Bunry, R. (2021). Internationalization of higher education in Cambodia: toward an agenda for higher education development. *International Journal of Comparative Education and Development*, 23(3), 193-211. <https://doi.org/10.1108/IJCED-08-2020-0049>

- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, 28(2), 118-144.
<https://doi.org/10.1016/j.jsis.2019.01.003>
- World Health Organization (2022, May 2). *COVID-19 joint WHO-MOH situation report 86*. <https://www.who.int/cambodia/internal-publications-detail/covid-19-joint-who-moh-situation-report-86>

Motivating Cambodian high school students to pursue higher education in science and health science majors: Issues and suggestions

Virak Sorn

*University of Puthisastra
Phnom Penh, Cambodia*

Monirath Suon

*University of Puthisastra
Phnom Penh, Cambodia*

Abstract

Education plays an essential role in developed and developing countries, including Cambodia. All higher education (HE) majors are vital to develop a country. However, science and health science majors deserve more interest from students as majors in this field contribute to improving human well-being and scientific advances that are crucial in socioeconomic development. Motivating high school students to pursue HE in science and health science majors remains a challenge for Cambodia that needs to adapt to Industry 4.0. This article discusses issues faced by Cambodian students when choosing majors for HE degrees. It then provides some recommendations to motivate high school students to consider enrolling in the science and health science majors for HE degrees.

Keywords: Higher education; higher education majors; motivation; science and health science; Cambodia

ARTICLE HISTORY

Received 6 December 2021

Accepted 8 June 2022

Introduction

Education plays a vital role in national and global development. It can develop human resources in technical skills and promote values, social development, poverty alleviation, and attitudes for sustainable economic growth (Chet, 2009). Likewise, higher education (HE) is commonly identified as crucial because it contributes to promoting socioeconomic growth (Dahles, 2017). Cambodia, one of the developing countries, has focused on enhancing HE quality because its education system still needs much improvement due to the fact that it went through prolonged civil wars in the previous decades (Ahrens & McNamara, 2013; Chet, 2009). Nevertheless, Cambodia is not the only country facing the issue of limited HE quality, as it is a global issue that needs to be addressed (Williams et al., 2016).

According to Sok and Bunry (2021), the number of higher education institutions (HEIs) in Cambodia has increased from 23 in 2000 to 97 in 2010 and 128 in 2021. Among them, about 94% of HEIs offer undergraduate programs, and only 6% offer postgraduate programs, with a total of around 250,000 enrolled students (Dahles, 2017). A report published by the Ministry of Education, Youth and Sport (MoEYS) in 2019 showed that the number of students enrolled in HE degrees decreased to 15% compared to the previous report in 2014 (MoEYS, 2019). Furthermore, the number of students enrolled in non-science and non-technology programs was much higher than in science and health science (Sok & Bunry, 2021).

Student enrollments in non-science programs like business-related majors (e.g., economics, management, accounting, finance, banking, administration, etc.) are prevalent in Cambodia, constituting up to 40% of the total enrollments. A total of 10% of the enrollments accounted for foreign languages, 7% for law, 2% for tourism, and 9% for other social sciences. In total, about 70% of the students were enrolled in social science-related degrees (Un et al., 2013; World Bank, 2012). One reason for this is that the business and language undergraduate program fees are much more affordable than science and health science programs (Sok & Bunry, 2021). However, only 30% of the enrollees chose science majors: 9% for information technology, 8% for engineering, 5% for science, 5% for health science, and 3% for agriculture. Overall, there is little interest in science and health science majors compared to social sciences,

especially business-related majors, although science and health science majors play a vital role in developing the country (Un et al., 2013; World Bank, 2012).

In 2021, a report released by MoEYS illustrated that there was a small percentage of enrollments for basic science (5%) and health science (5%) compared to the business-related subjects (42%) and other social science subjects (28%) such as foreign languages, law, tourism, and so on (MoEYS, 2021). Based on this report, most students were interested in social sciences rather than science and health science. This phenomenon can be because students have not been well-prepared to take up such advanced majors. Also, in Cambodia, the salary range of graduates with science-related majors has also not been provided appropriately compared to graduates with other majors.

To develop a country, all HE majors are crucial. However, science and health science majors arguably play the most important role because majors in these areas improve human well-being and scientific advances that benefit humankind. These majors can also provide better job opportunities with a good salary after graduation (Downey et al., 2011; Half, 2020; Walstrom et al., 2008). According to the Ministry of Health's Projection Plan 2012-2020, Cambodia required a total of 6299 nurses (primary nurses = 3508 and secondary nurses = 2791), 2954 midwives (primary midwives = 538 and secondary midwives = 2416), 867 medical doctors, and 129 specialist doctors (World Health Organization [WHO], 2015). Furthermore, to maintain the percentage of GDP growth within the range of 6-8 percent between 2018 to 2020, Cambodia needed about 35,000 engineers and 46,000 technicians (Japan International Cooperation Agency [JICA], 2016).

Nowadays, choosing the right major to study is a crucial consideration, as it enables students to become valuable human resources with solid foundational knowledge and skills that can assist in developing the human resources, economy, society, and infrastructure of Cambodia. Students' little interest in science and health science majors is still an issue that needs to be addressed to challenge and adapt to the Fourth Industrial Revolution or Industry 4.0 (Mon, 2022).

Against this background, this article aims to discuss issues regarding the selection of HE majors among Cambodian high school students and

suggestions to motivate them to select science and health science majors in HE. The article starts by looking at factors influencing students' choice of university majors. It then provides some suggestions to motivate students to choose science and health science majors when they pursue HE.

Issues influencing Cambodian high school students' choice of HE majors

In upper secondary school education, the Cambodian government allows Grade 12 students to select study majors through two tracks: social science or science (Kao & Shimizu, 2020; Sem & Hem, 2016). However, a report by MoEYS (2018) demonstrated that the majority of public schools in Cambodia had poor school infrastructure. Some schools had only a map or diagram but no computers when it came to instructional resources (MoEYS, 2018). This issue can affect the choice of major to study in HE because of the inequality of material resources and school infrastructure, which lead some students to get less or no opportunity to have experiments in science labs and explore the world of science. A recent study by Kao and Shimizu (2020) showed that some students chose a social science major because they believed social science is more manageable than a science major, given that it is easier for them to pass national examinations. In fact, some students who selected the social science majors in upper secondary schools changed their minds and applied for science and health science degrees in HE (Kao & Shimizu, 2020). This means that they may not be ready for the science degree and the national entrance examinations for health science majors (Kao & Shimizu, 2020). Some students, especially those who are unclear about their own talent and future career choice (Ly, 2021), chose their majors by relying on their network to provide better jobs based on their degree (Peou, 2017). For example, students might choose the major they were uninterested in (e.g., finance, banking, and law) due to family connections in this field and the promise of job offers in non-government or government sectors after they graduate (Peou, 2017).

Another issue can be related to the socioeconomic status of students' families, as tuition fees for science and health science-related majors tend to be higher than those of social science majors. More importantly, few scholarships for science and health science majors are available for both public and private HEIs, requiring students to pay full tuition fees and making some families unable to support their children in pursuing these costly majors (MoEYS, n.d.). Chea et

al. (2022) found that only 6% and 11% of health science and engineering respectively were tuition-waiver scholarships. However, 36% of the students were exempted from tuition fees for agricultural majors. Due to their family's financial constraints and lack of financial support, the majority of students were forced to study and work at the same time to support their tuition fee payments (Chea et al., 2022).

Suggestions to motivate Cambodian students to pursue science and health science majors

Choosing study majors for a HE degree in Cambodia is a key issue facing Cambodian students. To solve the issue, the government has developed the Education Strategic Plan 2019-2023 to improve equitable access to HE programs, which focuses on science, technology, engineering, and mathematics (STEM) majors (MoEYS, 2019). This is a roadmap for HE improvement toward internationalization, which promotes and motivates student enrolments in STEM.

Motivating students to enroll in STEM is important to promote enrollment in science and health science degree programs. Strategies or activities that promote participation in these programs include providing more scholarship opportunities, guidance on academic goals and career pathways, opportunities for exchange/internship programs in the field with various companies and universities, and conducting workshops and competition events (Chet & Un, 2019; Dy & Oladele, 2019; Harackiewicz et al., 2016; Williams et al., 2014). These are discussed below.

Offering more scholarship opportunities

The capacity to provide scholarship opportunities is recognized as the best way to promote science and health science degrees to students who have a good record in science subjects from high school (Dy & Oladele, 2019; Williams et al., 2014). More scholarships should be provided by the government, non-governmental organizations (NGOs), universities, and the private sector through competitions ranging from 50% to 100% scholarships, depending on students' abilities.

Providing academic and career planning guidance

This is important for students to understand their academic journey and navigate their career pathways, including expected requirements, benefits after graduation, and preparation for career competition for better-paying jobs (Harackiewicz et al., 2016). A clear understanding of academic and career pathways in science and health science may encourage more students to pursue their HE in this field.

Promoting exchange/internship programs with various companies and universities

Student exchange/internship is a valuable chance for high school students to meet many people from various majors and be able to seek advice from their seniors to prepare for their academic journey in science and health science majors. Such an exchange/internship provides high school students with an excellent opportunity to learn and understand things about science and health science from different perspectives. In addition, students can not only obtain information but also develop their personalities, experience different cultures, and learn new languages and skills that can be helpful for their future careers (Chet & Un, 2019; Dy & Oladele, 2019).

Conducting workshops and competitions

Conducting workshops is a way to introduce high school students to the field of science and health science, including the availability of subjects/majors in the field, duration of the study, financial expenses, career opportunities, and further education opportunities after graduation. This may help trigger high school students' interest in choosing the majors because some may lack the necessary information or advice. Furthermore, competition events allow students to engage in the field and improve their skills and interest through science and health science competitive programs. Such events would disseminate relevant information to stakeholders about students' potential in the field and provide support and opportunities for them in the future (Chet & Un, 2019; Dy & Oladele, 2019; Williams et al., 2014).

Overall, promoting student enrollment in science and health science majors is not the responsibility of MoEYS or universities alone. It is the work of all relevant stakeholders, especially the Department of Higher Education, Ministry of Health, Ministry of Economy and Finance, national and international NGOs, and the private sector, to establish motivating conditions and trigger student interest in the areas.

Conclusion

The rapid increase in enrollments in HE is a success that the Cambodian government has tried to achieve. However, there are still issues that need to be addressed, particularly the low percentage of student enrollments in science and health science majors. Science and health science degrees have been identified as important degrees, yet many students and parents tend to have little interest in these majors. This situation has resulted in an oversupply of graduates with business-related degrees that the job market is unable to absorb. In contributing to solving this issue, we need to consider increasing the number of scholarships for science and health science degrees, improving collaboration with various universities and companies for exchange/internship opportunities in the field, promoting career prospects for these majors, and conducting workshops and competition events to promote stakeholders' interest in the field of science and health science.

Acknowledgments

The authors would like to thank the editors of the Cambodian Education Forum, especially Mr. Koemhong Sol and Kimkong Heng, for their editorial support and the anonymous reviewers for their helpful comments on earlier versions of this article.

The authors

Virak Sorn is a research methodology lecturer in the Foundation Year Department, Faculty of English and Employability, University of Puthisastra. Email: svirak@puthisastra.edu.kh

Monirath Suon is a nursing lecturer in the Faculty of Nursing and Midwifery, University of Puthisastra.

Email: smonirath@puthisastra.edu.kh

References

- Ahrens, L., & McNamara, V. (2013). Cambodia: Evolving quality issues in higher education. In P. L. Symaco (Ed.), *Education in South-East Asia* (pp. 47-70). Bloomsbury. <http://dx.doi.org/10.5040/9781472544469>
- Chea, P., Teak, M., & Nok, S. (2022). Are students financially incentivised to enroll in Cambodian higher education? In P. Eam, P. Leng, S. Khieng, & S. Song (Eds.), *Cambodian post-secondary education and training in the global knowledge societies* (pp. 274-293). Cambodia Development Resource Institute. https://cdri.org.kh/storage/pdf/Cambodian%20PSET%20in%20the%20Global%20Knowledge%20Societies_1648631240.pdf
- Chet, C. (2009). Higher education in Cambodia. In Y. Hiroso, & Y. Kitamura (Eds.), *The political economy of educational reforms and capacity development in Southeast Asia: Cases of Cambodia, Laos and Vietnam* (pp. 153-165). Springer. https://doi.org/10.1007/978-1-4020-9377-7_10
- Chet, C., & Un, L. (2019). The internationalization of higher education in Cambodia. *Cambodia Journal of Basic and Applied Research*, 1(1), 6-15. <http://www.rupp.edu.kh/CJBAR/files/Vol-1-Issue-1/1-CHET-&UN-2019.pdf>
- Dahles, H. (2017). *The politics of higher education in Cambodia*. International Institute for Asian Studies. https://www.ias.asia/sites/ias/files/nwl_article/2019-05/IIAS_NL78_36.pdf
- Downey, J. P., Mcgaughey, R., & Roach, D. (2011). Attitudes and influences toward choosing a business major: The case of information systems. *Journal of Information Technology Education: Research*, 10, 231-251. <https://www.jite.org/documents/Vol10/JITEv10p231-251Downey984.pdf>
- Dy, C., & Oladele, M. O. (2019). A comparative analysis of the role of international organizations in financing higher education system: A case study of Nigeria and Cambodia. *US-China Education Review*, 9(1), 1-17. <https://doi.org/10.17265/2161-623X/2019.01.001>

- Half, R. (2020, September 24). *The 15 highest-paying IT jobs in 2021*. Robert Half. <https://www.roberthalf.com/blog/salaries-and-skills/the-13-highest-paying-it-jobs-in-2019>
- Harackiewicz, J. M., Smith, J. L., & Priniski, S. J. (2016). Interest matters: The importance of promoting interest in education. *Policy Insights from the Behavioral and Brain Sciences*, 3(2), 220-227. <https://doi.org/10.1177/2372732216655542>
- JICA. (2016). *Data collection survey on human resource development for industrialization in the education sector in the Kingdom of Cambodia* (Report No. HM-JR-16-042). <https://openjicareport.jica.go.jp/pdf/12092227.pdf>
- Kao, S., & Shimizu, K. (2020). Factors affecting Cambodian upper secondary school students' choice of science track. *International Journal of Sociology of Education*, 9(3), 262-292. <http://doi.org/10.17583/rise.2020.4823>
- Ly, S. (2021, January 08). *Factors to consider when choosing university majors*. Cambodian Education Forum. <https://cefcambodia.com/2021/01/08/factors-to-consider-when-choosing-university-majors/>
- MoEYS. (2018). *Education in Cambodia: Findings from Cambodia's experience in PISA for development*. <https://www.oecd.org/pisa/pisa-for-development/PISA-D%20national%20report%20for%20Cambodia.pdf>
- MoEYS. (2019). *Education strategic plan 2019-2023*. <http://www.moeys.gov.kh/index.php/en/policies-and-strategies/3206.html#.Yo2o6ShBzIU>
- MoEYS. (2021). *Education congress: The education, youth and sport performance in the academic year 2019-2020 and golds for the academic year 2020-2021*. <http://www.moeys.gov.kh/index.php/en/education-congress-2020/4216.html#.YYNgb55ByUk>
- MoEYS. (n.d.). *Higher education*. <http://www.moeys.gov.kh/index.php/en/higher-education.html#.YYOKI55ByUk>
- Mon, V. (2022). How can Cambodian youth prepare for industry 4.0? In K. Heng, K. Sol, C. Hum, S. Yen, & S. Ren (Eds.), *Critical issues in Cambodian education: Insights from youth* (pp. 112-127). Cambodian Education Forum. <https://cefcambodia.com/2022/02/01/new-book-critical-issues-in-cambodian-education-insights-from-youth/>
- Peou, C. (2017). On Cambodian higher education and skills mismatch: young people choosing university majors in a context of risk and uncertainty.

- Journal of Education and Work*, 30(1), 26-38.
<https://doi.org/10.1080/13639080.2015.1119258>
- Sem, R., & Hem, K. (2016). *Education reform in Cambodia: Progress and challenges in basic education*. Parliamentary Institute of Cambodia.
https://pcasia.org/pic/wp-content/uploads/simple-file-list/20170523-Education_Reform_Cambodia_Eng.pdf
- Sok, S., & Bunry, R. (2021). *Cambodia public higher education in 2040: Potential scenarios and the need for transformative leadership* (Working paper series No.1/2021). The Head Foundation. https://headfoundation.org/wp-content/uploads/2021/05/thf-papers_2021_Cambodian-Public-Higher-Education-in-2040.pdf
- Un, L., Chuon, R., & Ngin, C. (2013). *The roles of TVET and higher education in economic development in Cambodia*. Cambodia Development Resource Institute.
https://cdri.org.kh/storage/pdf/Special%20Report%2013e_The%20Role%20of%20TVET%20and%20Higher%20Education%20in%20Economic_1620205539.pdf
- Walstrom, K. A., Schambach, T. P., Jones, K. T., & Crampton, W. J. (2008). Why are students not majoring in information systems? *Journal of Information Systems Education*, 19(1), 43-54.
<https://jise.org/volume19/n1/JISEv19n1p43.pdf>
- WHO. (2015). *The Kingdom of Cambodia health system review*. WHO Regional Office for the Western Pacific.
<https://apps.who.int/iris/handle/10665/208213>
- Williams, J. H., Kitamura, Y., & Keng, C. S. (2014). Higher education in Cambodia: Expansion and quality improvement. *Higher Education Forum*, 11(1), 67-89. <http://doi.org/10.15027/37025>
- Williams, J. H., Kitamura, Y., & Keng, C. S. (2016). Higher education in Cambodia. In Y. Kitamura, D. B. Edwards, C. Sitha, & J. H. Williams (Eds.), *The political economy of schooling in Cambodia: Issues of quality and equity* (pp. 167-186). Palgrave Macmillan.
https://doi.org/10.1057/9781137456007_9
- World Bank. (2012). *Putting higher education to work: Skills and research growth in East Asia*. <https://doi.org/10.1596/978-0-8213-8490-9>

About Cambodian Journal of Educational Research (CJER)

The Cambodian Journal of Educational Research (CJER) is a peer-reviewed academic journal initiated and managed by the Cambodian Education Forum (CEF). CJER publishes English manuscripts in the field of education, which would be of interest to Cambodian or international readership. All manuscripts must be original and have not been previously published or currently under publication consideration elsewhere. All manuscripts submitted to CJER will go through an initial screening by the CJER editorial team. The editorial team will then decide whether or not to send a manuscript for a blind peer review by two invited reviewers.

CJER publishes two issues annually (the first issue will be published in June and the second issue in December). Submissions to CJER can be made throughout the year following the CJER submission guidelines. Accepted manuscripts will be published online first and will later be included in one of the two issues.

Editorial board

Editors-in-Chief

Kimkong Heng (co-founder of CEF)

PhD candidate (The University of Queensland, Australia)

Visiting Senior Research Fellow (Cambodia Development Center, Cambodia)

Former lecturer of English (The University of Cambodia, Cambodia)

Koemhong Sol

PhD candidate (International Christian University, Japan)

Former lecturer of English (Paññāsāstra University of Cambodia, Cambodia)

Managing Editor

Sopheap Kaing (co-founder of CEF)

PhD in Educational Science (University of Fribourg, Switzerland)

Former lecturer of English (The University of Cambodia, Cambodia)

Editors

Vutha Ros (co-founder of CEF)

PhD candidate (The University of Hong Kong, Hong Kong SAR)

Lecturer of English (Royal University of Phnom Penh, Cambodia)

Tithchanbunnamy Lor

PhD in Education (Charles Darwin University, Australia)

Research assistant (Charles Darwin University, Australia)

Jennifer McMahon

Doctor of Education (University of Rochester, USA)

Programme Director and Professor (University of Applied Research and Development, New Zealand)

Director of Learning (Livonia Central School District, USA)

Samell Keo

Doctor of Education (Wonkwang University, South Korea)

Director (Academic Center for Education and Training, Cambodia)

Associate Editors

Saban Bon

PhD student (Mae Fah Luang University, Thailand)

School administrator (Prek Leap High School, Cambodia)

Sereyrath Em

PhD student (University of Szeged, Hungary)

Lecturer of English (Chea Sim University of Kamchaymear, Cambodia)

Chan Hum

PhD student (The Education University of Hong Kong, Hong Kong SAR)
Former Head of Personal Office (National University of Battambang,
Cambodia)

Dara Kao

Master of Education (Paññāsāstra University of Cambodia, Cambodia)
Director of English program (Paññāsāstra International School, Cambodia)

Somphors Khan

PhD student (The University of Cambodia, Cambodia)
Lecturer of English (Chea Sim University of Kamchaymear, Cambodia)

Phakdey Ouch An

MA in TESOL (Royal University of Phnom Penh, Cambodia)
Lecturer of English (University of Heng Samrin Thbongkhmum,
Cambodia)

Sophea Phann

MA in TESOL (Royal University of Phnom Penh, Cambodia)
Head of ASEAN Office (Ministry of Education, Youth and Sport,
Cambodia)

Ramil Sanchez

MA in Educational Management (University of Santo Tomas, Philippines)
Managing Editor (International Journal of Business and Management,
Philippine Christian University)

Sokun Song

MA in TESOL (University of Canberra, Australia)
Dean of Standard Testing and Global Education Institute (Paññasastra
University of Cambodia, Cambodia)

Guest Editors

Bunhorn Doeur

PhD candidate (University of Southern Queensland, Australia)
Former senior lecturer (Paññāsāstra University of Cambodia, Cambodia)

Makara Muong

Master of Education (Royal University of Phnom Penh, Cambodia)
Vice principal (ASEAN International School, Cambodia)

Samnang Yen

MA in International Relations (University of Cambodia, Cambodia)
Officer (Ministry of Foreign Affairs and International Cooperation, Cambodia)

Chandarin Chum

PhD in Public Policy (National University of Public Service, Hungary)
Visiting Research Fellow (German Institute for International & Security Affairs, Germany)

Sovanncharya Ren

Master of Education (Royal University of Phnom Penh, Cambodia)
Program Manager (Teach for Cambodia, Cambodia)

Huan Yik (Patrick) Lee

PhD candidate (The University of Queensland, Australia)
Lecturer (English Language Teaching Centre, Teacher Education Division, Ministry of Education, Malaysia)

Reviewers

Piseth Hull

Master of Education (Hiroshima University, Japan)
MA in TESOL (Royal University of Phnom Penh, Cambodia)
Teacher trainer (Regional Teacher Training Centre, Kampong Cham, Cambodia)
Lecturer of English (Western University, Kampong Cham, Cambodia)

Sovannara Hun

Master of Education (Flinders University, Australia)
Master of Education (Royal University of Phnom Penh, Cambodia)

Imran Hussain

Master of Philosophy in English Applied Linguistics (The University of Lahore, Pakistan)

Lecturer & Researcher (Thai Association for Applied Linguistics)

Kongkea Kann

BA in TESOL (Paññāsāstra University of Cambodia, Cambodia)

Academic Research and Development Officer (NTC Group)

Sovansophal Kao

PhD in Education (Hiroshima University, Japan)

MA in Education (Hiroshima University, Japan)

Master of Education (Royal University of Phnom Penh, Cambodia)

Bunly Kep

PhD in Leadership (Paññāsāstra University of Cambodia, Cambodia)

Lecturer (The University of Cambodia, Cambodia)

Reahul Kit

Master's degree student (The University of Cambodia, Cambodia)

English instructor (The University of Cambodia, Cambodia)

Suriya Klangrit

PhD candidate (Mahidol University, Thailand)

International relations officer (Division of International Affairs, Rajamangala University of Technology Isan, Thailand)

Bunteng Long

PhD in Innovative Technology Management (Assumption University, Thailand)

Dean of Faculty of Management Hotel and Tourism & Director of International Programs (Western University, Cambodia)

Piseth Neak

Master of Education (Chulalongkorn University, Thailand)

Lecturer of English (Royal University of Phnom Penh, Cambodia)

Davut Nhem

MA in TESOL (Royal University of Phnom Penh, Cambodia)

Lecturer of English (Royal University of Phnom Penh, Cambodia)

Khorry No

Master of Education (Royal University of Phnom Penh, Cambodia)
Teacher of English (Samdech Chuon Nath High School, Kampong Cham, Cambodia)

Sopha Phon

PhD in Economics (Thammasat University, Thailand)
Lecturer (National Bank of Cambodia, Cambodia)
Founder and CEO of Cambodia Econometric Association (Cambodia)

Meassnguon Saint

PhD candidate (Chulalongkorn University, Thailand)
Former lecturer of English (Western University, Cambodia)

Gechu Sambath

BA in TEFL (Royal University of Phnom Penh, Cambodia)
Teacher of English (Australian Centre for Education, Cambodia)
2020 Young Research Fellow (Future Forum, Cambodia)

Vannak Sao

Master of Education (Royal University of Phnom Penh, Cambodia)
English teacher (Prek Leap New Generation School, Cambodia)

Sekkhapirath Set

Master in TESOL (Royal University of Phnom Penh, Cambodia)
English teacher (Bousra High School, Cambodia)

Sothearak Sok

Lecturer of International Studies (Royal University of Phnom Penh, Cambodia)
BA in International Studies (Royal University of Phnom Penh, Cambodia)
BA in English for International Business (Royal University of Phnom Penh, Cambodia)

Gemar M. Sullano

MA in Teaching Social Studies (University of Rizal System, Philippines)
Social Sciences Teacher (Bugarin National High School, Philippines)

Sokna Sun

MA in TESOL student (University of South-East Asia, Siem Reap, Cambodia)
English program manager and teacher (Ta Pen Primary and Secondary School, Siem Reap, Cambodia)

Loeurt To

Master of Development Studies (Victoria University of Wellington, New Zealand)

Vice dean (Faculty of Education, Dewey International University. Cambodia)

Vuthy Uy

Master of Education (Royal University of Phnom Penh, Cambodia)

English teacher and founder of International Project (Hun Sen Chamkardaung High School, Kep, Cambodia)

Cedy Vutha

MA in TESOL (Victoria University of Wellington, New Zealand)

Lecturer of English (Royal University of Phnom Penh, Cambodia)

Wathnak Vy

Master of Counselling and Psychotherapy (Edith Cowan University, Australia)

Counselling and Psychotherapy practitioner (Men Wathnak Group, Australia)

Sak Yeourng

PhD student (BELTEI International University, Cambodia)

English teacher (Samdach Ouv High School, Cambodia)

... and several other anonymous reviewers.

Junior Reviewers**Sethi Cheam**

BA in Translation and Interpretation (Royal University of Phnom Penh)

BA in International Relations (Paññāsāstra University of Cambodia)

Phearun Chhoeurm

4th year student (Royal University of Phnom Penh & The University of Cambodia)

Pech Monyleap Neang

4th year student (Paragon International University)

Kanika Nhil

4th year student (Royal University of Phnom Penh & Paññāsāstra University of Cambodia)

Sokvy Rim

BA in International Relations (Royal University of Phnom Penh)
Co-founder (The Thinker Cambodia)

Piseth Yim

MA in TESOL student (Royal University of Phnom Penh)

Sreypich Lay (since Jan 2022)

4th year student (Paragon International University)

Submission guidelines

Structure

Full-length articles should be compiled in the following order: article title; abstract; keywords; main text (introduction, literature review, methods, results/findings, discussion, and conclusion); acknowledgments; declaration of interest statement (if applicable); author bio; references; and appendices (if applicable).

Short articles should contain article title; abstract; keywords; main text (introduction, body, and conclusion); acknowledgments; declaration of interest statement (if applicable); author bio; references; and appendices (if applicable).

Book reviews should include complete bibliographic information of the book (i.e., book title in full, authors or editors, place of publication, publisher, date of publication, pages, price, and ISBN/DOI); a concise summary of the book; a critical assessment of the book content (strengths and weaknesses); and suggestions for readers.

Formatting

- Articles must be submitted with 1.5 line spacing on an A4-sized Word document with margins on all sides at 2.54 cm (1 inch).
- Articles must be in Times New Roman 12-point font and be justified (except the reference list).
- Articles titles, headings, and sub-headings must be in sentence case (i.e., capitalizing only the first word and proper nouns), left aligned, and bold.
- Double quotation marks should be used for direct quotes.
- Quotations of more than 40 words should be set off from the main text by indentation, without any quotation marks.

Word limits

CJER accepts the following types of articles:

- Full-length articles (no longer than 7000 words)
- Short articles (no longer than 3500 words)
- Book reviews (no longer than 1500 words)

All word counts include everything such as abstract (no longer than 150 words), main text, references, and appendices.

References

Acknowledgment of sources (both in-text citations and the reference list) must follow the APA 7th referencing style. For more information about the APA 7th edition, see <https://guides.library.uq.edu.au/referencing/apa7>.

Submission

All submissions must be sent to cef.correspondence@gmail.com along with an abstract and a short bio of no more than 50 words for each contributing author.

Correspondence

All correspondence regarding subscriptions, advertisements, and permission

to republish should be sent to the Cambodian Education Forum at cef.correspondence@gmail.com. For more information about the Cambodian Education Forum, visit www.cefcambodia.com.

Disclaimer

The Cambodian Education Forum makes every effort to ensure the accuracy of all the information contained in its publications. However, the Cambodian Education Forum and its co-founders and editors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the information contained in the publications of the Cambodian Education Forum. Any views expressed in this publication are the views of the authors and are not the views of the Cambodian Education Forum or its editors.

Call for articles

CJER currently publishes short and full-length education-related articles and book reviews. If you are interested in publishing in CJER, feel free to submit your article to our team at cef.correspondence@gmail.com.

Please refer to the general submission guidelines above for more information on word limits, referencing styles, and the peer-review process, or visit our website: www.cefcambodia.com.

About Cambodian Education Forum

Background

The Cambodian Education Forum (CEF) was co-founded on July 1, 2020 by a group of three emerging Cambodian researchers (Kimkong Heng, Sopheap Kaing, and Vutha Ros) who aspire to promote education research and publication in Cambodia. The team was later joined by Koemhong Sol, also an emerging Cambodian researcher. The common vision is to provide a platform for Cambodian researchers, educators, teachers, students, and administrators, especially novice and emerging writers, to express their views and share their perspectives, understanding, and research findings on topics relevant to education in Cambodia and beyond.

CEF strongly believes that Cambodian students, teachers, academics, and researchers have a wealth of knowledge and perspectives to share in shaping understanding, beliefs, and attitudes regarding education-related issues confronting Cambodia and other countries in the region and the world.

Although the focus is on education in Cambodia, CEF welcomes and publishes unsolicited short or full-length research articles on educational issues of interest to readers in countries in the region and beyond.

Aims

CEF's main aims are as follows:

- To provide a publication platform for Cambodian researchers, educators, and students
- To share knowledge, research findings, and informed opinions about education in Cambodia and beyond
- To support Cambodian novice writers to publish through quality peer review, mentorship, and editorial processes

- To publish essays, opinion pieces, and research articles about education in Cambodia and beyond
- To offer insights from education experts through interviews, discussions, and publications
- To share education-related resources to students, teachers, academics, and researchers
- To promote Cambodia's image in the regional and international arena

Philosophy

CEF is still under development, but the vision behind this initiative is ambitious and inclusive. We seek to promote research and publication in Cambodia, particularly research conducted by Cambodians.

We are currently seeking funding, sponsors, donors, and volunteers to maintain and sustain this platform to offer common benefits to diverse users such as students, teachers, academics, and researchers.

We start as a small team, aim high, and aspire to make a positive impact on the education sector and the research and publication culture in Cambodia. Now the CEF editorial board is comprised of Editors-in-Chief, Managing Editor, Editors, Associate Editors, Guest Editors, Reviewers, and Junior Reviewers.

We believe each Cambodian has a vital role to play in shaping and improving Cambodian society and raising Cambodia's image on the global stage.

We start small, aim big, and aspire to create a real positive impact.

Cambodian Education Forum (CEF)

Email: cef.correspondence@gmail.com
 Website: www.cefcambodia.com
 Facebook: www.facebook.com/CEF.Cambodia
 Twitter: www.twitter.com/CEFCambodia
 Telegram: t.me/cefcambodia

The Cambodian Journal of Educational Research (CJER) is a peer-reviewed academic journal published by the Cambodian Education Forum (CEF). CJER currently publishes short and full-length articles as well as book reviews. It is published two times per year and welcomes original manuscripts that would be of interest to Cambodian or international readership.

For more information, visit www.cefcambodia.com/cjer

CAMBODIAN
EDUCATION
FORUM

A forum for education