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Editorial

Research development in Cambodia: Key challenges and recommendations

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Introduction

Welcome to Volume 2 and Issue 2 of the Cambodian Journal of Educational Research (CJER). In this editorial, we discuss the importance of research, challenges to research development in a general context and in Cambodia, and recommendations to promote research in Cambodia. We then provide an overview of the articles included in this issue.

The importance of research

Research is important because it helps to increase our understanding of the world around us. It allows us to develop new technologies, treatments, and policies that can improve people's lives and solve important problems (see Barrett et al., 2016; Ekolu, 2017; McClure & Jaeger, 2008). Additionally, research helps to advance scientific knowledge leading to new discoveries and innovations (Mujumdar, 2013). It also helps to improve the way we think, make decisions, and understand the complexity of the world around us (Khalid et al., 2020; Larson, 2021). Furthermore, research can be applied to different fields such as education, engineering, medicine, and more to make advancements in those fields.

Creswell (2012) noted that research is important for three main reasons. First, it "adds to our knowledge" (p. 4). Through research, we can find solutions to address problems or issues in society. Second, research "improves practice" (p. 4). Research can bring about new ideas and provides a basis for evaluating the current practice. Third, research "informs policy debates" (p. 5). In particular, research results are important for policymakers to make informed decisions about various issues of significance to communities and society.

For many countries, including developing countries such as Cambodia, research is important for several reasons. First, it drives economic growth. Research can help identify new areas for economic growth and development, such as new industries or technologies (Bayarcelik & Taşel, 2012; Kwok et al., 2010). It can also help to improve the productivity and efficiency of existing industries.

Second, research improves health and well-being. It can help to improve health outcomes by identifying and addressing public health issues, such as infectious diseases and malnutrition. It can also help to improve access to healthcare and education (see Gostin et al., 2009; Lewin, 2007).

Third, research also improves national competitiveness. It can help developing countries to catch up with their developed counterparts or compete globally by identifying new technologies and industries that can be developed and exported (World Bank, 2009). As Heng et al. (2022b) argued, research could play an integral part in improving Cambodia's competitiveness. They wrote:

> As research is needed to support Cambodia's aspirations to develop itself into a knowledge-based society and enhance its competitiveness in the global knowledge-based economy, it is crucial to foster national and institutional environments conducive for research. (p. 13)

Fourth, research can promote environmental sustainability. In particular, it can help to identify and address environmental issues, such as deforestation and pollution, that can have negative impacts on the well-being of communities and society (Foote et al., 2009). With research, we can better understand global

environmental issues, such as climate change; as a result, appropriate solutions could be developed to address such global problems.

Overall, the importance of research is well-recognized and cannot be overstated, particularly in developing countries, because it can help to drive economic growth, improve the well-being of communities, boost competitiveness, and promote environmental sustainability.

Common challenges to research development in developing countries

There are many challenges to research development in developing countries. First and foremost, it is funding constraints. In developing countries, funding for research is usually limited (Fussy, 2019; Jacob, 2007; van Helden, 2012). Such limitations can affect the scope and scale of research projects, making it difficult to conduct research to achieve desired outcomes.

Second, there are time constraints. In developing countries such as Cambodia, university lecturers have to teach many classes to earn additional income to supplement their basic salary or poorly paid hourly teaching rate (Chhaing & Phon, 2022; Heng et al., 2022a, 2022b). As a result, they generally do not have time to commit to research that requires significant time and effort to complete.

Third, it is an issue related to limited resources. This could be limited access to academic databases, lack of research facilities or laboratories, and/or limited institutional support (see, for example, Abu-Zidan & Rizk, 2005; Rahman et al., 2020). Research in science, for example, often requires specialized equipment and expertise, which can be difficult to obtain or expensive to acquire.

Fourth, there are also challenges stemming from a lack of collaboration and communication. Most research projects require effective collaboration and communication among researchers, stakeholders, and partners, which can be difficult to achieve. In the case of Cambodia, a culture of research collaboration is limited due to various constraints related to the limited availability of resources and facilities for research and limited effectiveness in terms of coordination and governance in higher education (see, for example, Cambodian Institute for Cooperation and Peace [CICP], 2016; Heng, 2022; Kwok et al., 2010; Mak et al., 2019).

Fifth, it is the issue of limited research capacity resulting from limited resources for research. Many universities and researchers in developing countries are operating in a resource-scarce environment, which severely affects their research capacity and opportunities (Altbach, 2003; Fussy, 2019; Heng et al., 2022b). Without sufficient funding, lecturers may not have access to the latest equipment and facilities needed to conduct research. This can make it harder for them to generate high-quality data and results.

Major challenges to research development in Cambodia

In Cambodia, there are many challenges to research development (see Heng & Sol, 2021 for a recent review of the progress and challenges for academic research in Cambodia). As previous research has shown, there are challenges related to a lack of resources and infrastructure for research, limited human resources, limited academic freedom due to political interference, linguistic and cultural barriers, limited international collaborations, and a lack of meritocracy systems (see CICP, 2016; Heng, 2022; Heng et al., 2022a, 2022b; Kwok et al., 2010).

The issue related to the lack of resources and infrastructure for research is prevalent. In particular, it has been reported that the lack of infrastructure, including labs, equipment, and technology, necessary to support research has prevented many Cambodian university lecturers and researchers from engaging in research activities despite their interest in it (Heng, 2022; Kitamura et al., 2016).

There are also problems caused by the lack of human resources. Kwok et al. (2010) stated that Cambodia had to grapple with a loss of a generation of intellectuals due to civil wars and the genocidal Pol Pot regime. This has constrained the healthy development of research as many Cambodian researchers are less experienced in research, and there is a shortage of trained and qualified researchers as well as research experts whom young researchers could turn to when they need research advice (Kwok et al., 2010).

Limited academic freedom is another major challenge. Although this issue seems to be under-researched, it is undeniable that academic freedom in Cambodia remains limited (Heng, 2020a). This issue of limited academic

freedom is linked to politics or political interference in other sectors, including education. As a result, some, if not many, lecturers or researchers find themselves in a situation where they need to choose a research topic selectively or conduct research that may not lead to repercussions for them (see CICP, 2016).

Linguistic and cultural barriers also pose a great challenge to research development in Cambodia. As Altbach (2013) noted, "Without a reasonably high level of skill in English by both academic staff and students, universities cannot function effectively in the global knowledge network" (p. 325). Relatedly, Heng (2022) found that limited English proficiency made many Cambodian academics unable to be productive in research. Cultural barriers can also make it difficult for Cambodian researchers to conduct research, as certain traditional practices and beliefs, such as respect for the elderly, may not align with the principles of research, including the need for questioning or investigation (Din, 2022; Kwok et al., 2010).

Limited international collaboration is another challenge to research development. Much of the research in Cambodia is collaborative or sponsored research; however, the level of research collaboration between Cambodian researchers and between Cambodian and foreign research remains low (see Barrot, 2021). Limited international collaboration means limited access to international funding and expertise for research projects, resulting in limited research conducted by Cambodian researchers.

Finally, the lack of a meritocracy system is another major challenge for developing research in Cambodian higher education and in Cambodia at large (Chhaing, 2022). A lack of meritocracy can lead to a lack of accountability, which can make research projects less efficient and less productive. Researchers may not be motivated to work hard or produce high-quality results if they know that their efforts will not be rewarded. In addition, without a merit-based system, research may become dominated by a narrow group of individuals who are highly motivated or have better access to research resources or opportunities, leading to a lack of diversity in ideas, perspectives, and research activities.

Recommendations to promote research in Cambodia

To promote research and publication in Cambodia, a lot needs to be done. First, we need to ensure the provision of funding and resources for research. This requires investment in research and building research infrastructure such as laboratories, libraries, and research centers to support research activities. Thus far, MoEYS has considerably invested in Cambodian higher education through projects such as Higher Education Quality and Capacity Improvement Project (HEQCIP) and Higher Education Improvement Project (HEIP) (see Heng, 2020b; Heng & Sol, 2021); however, more investment in higher education is much needed. Therefore, providing funding and resources for researchers to conduct their studies and publish their findings is essential. This can include financial support, access to equipment and facilities, and support for data collection and analysis.

Second, we need to provide training, capacity building, and support for researchers, lecturers, and research students to help them further develop the skills and knowledge needed to conduct high-quality research and publish their findings. This can include workshops on research methods and publication, as well as mentoring and training on research and publication skills. As Heng (2021) argued, research training should be regularly provided to support less experienced researchers to actively engage in research. It is also important to ensure each university has a functioning research office or center that can serve as a platform for researchers to find research support as well as useful research-related information, including research grants and/or research collaboration opportunities (see Heng, 2022 for further discussion on this).

Third, there is a need to create an enabling environment for research to increase interest in research. This can include, among others, improving regulations related to research, such as intellectual property laws, developing a research policy that will set priorities and provide guidelines for research activities, creating a website to showcase research findings, hosting events to present research findings, and promoting research in the media, particularly Facebook and Telegram.

Fourth, it is important to encourage collaboration between researchers so that they can share their findings, knowledge, and skills. This can include creating

opportunities for researchers to meet and discuss their work or providing funding for joint projects. Equally important is the need to establish networks for researchers, commonly known as a community of research practice (see Keuk, 2015). Opportunities for one researcher to network with other researchers and institutions can help to create opportunities for collaboration and publication. This can include attending conferences and workshops, joining professional organizations, and building relationships with other researchers.

Fifth, it is essential to create a culture of research, particularly an institutional culture, that values and encourages research and publication (see Kwok et al., 2010). This can be done by providing recognition and rewards for researchers who publish their work and promoting the importance of research to both staff and the public. In addition, it is important to consider research and publication as one of the key criteria for academic recruitment, evaluation, promotion, and recognition (Heng, 2021).

Sixth, it is crucial to encourage private sector involvement through a model of government-academia-industry collaboration (see Heng, 2020c; Sam & Dahles, 2017). In this regard, the government should collaborate with universities and the private sector to promote research and development in Cambodia. As research has shown that the private sector in Cambodia has limited involvement in higher education development (Sam & Dahles, 2017), it is imperative that the private sector should be encouraged to invest in research and development in Cambodia to help promote research and innovation that support economic growth. This can be done by providing financial incentives. The Cambodian government, for example, can offer tax breaks, grants, and subsidies to companies that invest in research and development. Moreover, the government and higher education institutions can partner with private companies to collaborate on research projects, share resources, and utilize expertise.

Seventh, there is a need to increase awareness of research and promote scientific literacy among the general population through various mechanisms such as public lectures; research workshops or seminars; research forums, fairs, or conferences; and other awareness-raising activities. The general public should be educated about the importance of research and the benefits it can bring to

Cambodia. This is crucial as research has consistently shown that the social appreciation for research and research outputs in Cambodia remain limited (Oleksiyenko & Ros, 2019). With better research awareness and appreciation, there will be more interest in research, which could in turn make a difference to the research culture in Cambodia.

Eighth, it is time to prioritize reward and recognition for researchers and make it the centerpiece of the academic culture in Cambodia. Researchers who conduct quality research should be rewarded and/or recognized for their contributions to society and the academic community. This will foster a culture of meritocracy that is lacking in Cambodia's academic culture. With an effective system of rewards and recognition for researchers, the value given to research and publication will increase, which in turn will encourage more lecturers and researchers to commit to research and publication activities.

Overview of this issue

This issue of CJER contains six articles, including five full-length articles and one short article. One of the full-length articles by Sophal Kao was made available online first in October 2022. Three articles were based on empirical data, while the other three were based on secondary data and personal experience. Four articles included in this issue look at a range of educational issues concerning the Cambodian context. The other two articles respectively discuss a personal philosophy of education and the concept of epistemology in research.

The first full-length article by Sereyrath Em and his colleagues employed quantitative research approaches to investigate English as a Foreign Language (EFL) university students' perceptions of online learning effectiveness at a Cambodian provincial university during the COVID-19 pandemic. The study showed that Cambodian university students' perceptions of online learning effectiveness were moderate and that there was no statistically significant difference in their perceptions in relation to their gender and years of study. The second full-length article by Sereynivorth Mel explores teachers' and students' perceptions of the practice of inquiry-based learning (IBL) in physics classrooms. Drawing on interview responses from teachers and students at a New Generation School in Cambodia, the study showed that, despite some

challenges in implementing and adapting to the IBL approach, teachers and students were of positive perceptions of the benefits of IBL in helping students to understand scientific phenomena and develop various important learning skills.

The third full-length article by Somphors Khan and Sereyrath Em compares the learning achievements of chemistry students who attended private tutoring and those who did not. Based on quantitative data gathered from Grade 11 students at a Cambodian public high school, the study revealed no statistically significant difference in terms of learning achievements between the two groups of students. However, based on the mean scores, students who attended private tutoring were found to perform better in a chemistry test than those who did not attend private tutoring. The fourth full-length article by Koemhong Sol and Kimkong Heng focuses on epistemology and its key approaches in research. The article provides several definitions of the term epistemology, answers some epistemological questions, and discusses three epistemological approaches in research, namely positivism, interpretivism, and pragmatism. It concludes that a high level of epistemic justification is necessary for knowledge claims and for the conduct of research. The last full-length article by Sophal Kao discusses his own philosophy of education. Using autoethnography as an approach, the author reflected on, analyzed, and discussed his educational practice and teaching experience.

The final article in this issue is a short article by Bunhorn Doeur who discusses the issues concerning higher education reforms in Cambodia. The article focuses mainly on key challenges to higher education reforms and offers some recommendations on how Cambodian universities can contribute to accelerating higher education reforms in the country.

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