

Understanding Cambodian provincial university students' perspectives on Cambodia's vision to become a knowledge-based society

Kimkong Heng*
Cambodian Education Forum

Abstract

This study examines the perspectives of Cambodian provincial university students about Cambodia's vision to transform itself into a knowledge-based society. The study employed a qualitative approach to gather data to answer three research questions. Based on document analysis and in-depth interviews with 21 university students from three provinces, it was found that Cambodian university students had a superficial understanding of the term knowledge-based society. They were ambivalent, expressing both optimism and pessimism, when it came to Cambodian universities' contributions to supporting Cambodia's development into a knowledge society. The study also revealed a number of challenges facing university students in provincial Cambodia, such as limited access to educational resources and opportunities, inadequate opportunities for gaining practical knowledge and skills needed for the job market, and other issues of various nature. The study sheds light on how Cambodian university students perceive Cambodia's aspirations for becoming a knowledge-based society and has implications for policy, practice, and future research.

Keywords: Knowledge-based society; university students; Cambodian universities; province; Cambodia

Introduction

International organizations such as the World Bank and the Organisation for Economic Co-operation and Development (OECD) have promulgated that the ability to produce, use, and disseminate knowledge is at the core of a knowledge-based economy and a driver of economic productivity and growth (OECD, 1996; World Bank, 1999). The World Bank, for example, has published several key reports that highlight the role of knowledge in advancing the global knowledge-based economy (World Bank, 1999, 2007) and the role of higher education in enabling less developed countries to catch up with their developed counterparts (World Bank, 2000, 2009).

As the role of higher education has gained traction, more attention has been placed on the development of the higher education system, particularly on building the capacity of universities to produce knowledge and drive innovation through research (Heng, 2022). As a

* Kimkong Heng, PhD, is an alumnus of the Australia Awards. He is a Co-founder and Editor-in-Chief of the Cambodian Education Forum and a Senior Visiting Research Fellow at the Cambodia Development Center. Currently, he works as a National Technical Advisor on Research and Development at the Department of Scientific Research, Ministry of Education, Youth and Sport. Email: kimkongheng@gmail.com

result, universities in many developing countries have begun to feel the pressure of having to contribute to producing graduates that are qualified for the changing labor market in the 21st century (Heng, 2022). However, given their limited resources, many developing countries are facing numerous challenges in improving the quality of their higher education and enhancing the research capacity of their universities. As Altbach (2003) observed:

What we do know about the conditions of the academic profession and of academic work in the developing world is not positive. Conditions of work and levels of remuneration are inadequate, involvement in institutional governance is often very limited, and the autonomy to build both an academic career and academic programs in the university is often constrained. (p. 1)

Against this backdrop, the present study is conducted to investigate the contributions of universities in Cambodia in supporting the country's aspirations to transform itself into a knowledge-based society, a goal that Cambodia has recently begun to emphasize (MoEYS, 2019). The study specifically aims to investigate the perspectives of Cambodian provincial university students enrolled in bachelor's, master's, and doctoral degrees regarding the role of universities in supporting Cambodia's aspirations for knowledge society. As Cambodia's ambitions to become a knowledge-based society have received little scholarly attention, this study intends to fill this knowledge gap and shed light on how Cambodian provincial university students understand Cambodia's vision for knowledge-based society.

The present study is useful for policymakers and relevant stakeholders, such as Cambodian government institutions, development partners, non-governmental organizations (NGOs), and Cambodian higher education institutions (HEIs), in their efforts to promote education quality and research capacity in Cambodian higher education (for reviews of recent developments in academic research in Cambodia, see Heng & Heng, 2023; Heng & Sol, 2021). The findings of the study are also useful for researchers, teachers, and students who are interested in understanding how Cambodian university students based in the provinces perceive Cambodia's aspirations to become a knowledge society.

This study seeks to answer three research questions:

1. How do Cambodian provincial university students perceive the concept of knowledge-based society?
2. How do Cambodian provincial university students perceive the role of Cambodian universities in supporting Cambodia's vision to become a knowledge-based society?
3. What challenges do Cambodian provincial university students face in preparing themselves for a knowledge-based society?

Defining a knowledge-based society

The term 'knowledge-based society' refers to a well-educated society that relies on the knowledge of its citizens to stimulate innovation, entrepreneurship, and economic development (Djoub, 2017; Grbić et al., 2020). In the fast-changing modern world, innovative capacity and

competitive advantage are vital to ensure the economic growth of each country (Răulea et al., 2016), making knowledge the primary resource for driving changes (Šlaus, 2007). Analysis of post-industrialized countries, such as the United States and countries in western Europe, showed that 70-80% of their growth was achieved by the contribution of new knowledge (Nyíri, 2002). Moreover, the notion of a knowledge-based society is also perceived as a prerequisite for a sustainable society which is “a society of active, healthy, educated, free, creative and happy persons and their diverse developing and evolving cultures; with strong and mutually supportive linkages among biological, ecological, physical, economic, business, social, R&D (research and development) and political systems” (Šlaus, 2007, p. 989). Toward a knowledge-based society, the call for better education, especially higher education, is at a high peak in order for a country to develop human capital capable of keeping up with the growing complexity of work processes and modern economic activities (Poltermann, 2014).

In a knowledge-based society, universities and research institutes play a pivotal role in creating new knowledge and stimulating innovation. As Etzkowitz et al. (2000) argued, universities are “a knowledge producing and disseminating institution” (p. 314). They are, according to Altbach (2013), “at the center of the global knowledge economy” (p. 316) and are “central to the transition to modernity in Europe and America and later in the rest of the world” (Delanty 2001, p. 150). In addition, as a knowledge-based society depends on knowledge and the ability of individuals to create, use, and disseminate knowledge to drive development and innovation, the role of universities and other knowledge-generating institutions has become increasingly important. As Breznitz (2014) noted:

Universities, viewed as fountains of knowledge, produce the world’s most important resources: young minds and an educated labor force, which in turn produce cutting-edge research and innovative ideas and products that contribute directly to economic development. (p. 1)

Likewise, Eam (2022) argued that the role of universities and other higher education institutions is “central and foundational” in a knowledge-based society (p. 29). They are the engines of social development as they play a crucial role in preserving, producing, innovating, and transmitting knowledge needed to facilitate research, innovation, and policy formulation (Eam, 2022). Ranga and Etzkowitz (2013) also noted that innovation and economic development rely on the important role of universities and “the hybridization of elements from university, industry and government to generate new institutional and social formats for the production, transfer and application of knowledge” (p. 238).

Cambodia’s development vision

Cambodia envisages to become an upper-middle-income country by 2030 and a high-income country by 2050 (Royal Government of Cambodia [RGC], 2018). In its Rectangular Strategies for Growth, Employment, Equity, and Efficiency (Phase IV), the Cambodian government outlined four priority areas (people, road, electricity, and water), with the emphasis on people. For example, this policy document stated:

Human resource development is considered the priority of the Rectangular Strategy in every stage, and in particular, has become the first priority in the stage 3 and stage 4, aimed at improving education, vocational skills, competence, entrepreneurship, creativity, innovation, virtue, morality, patriotism and sense of responsibility, health and physical fitness, women's roles and social protection. (RGC, 2018, p. 20)

Meanwhile, the Ministry of Education, Youth and Sport (MoEYS) of Cambodia, in its latest Education Strategic Plan (ESP) 2019-2023 (MoEYS, 2019), has emphasized the need to transform the country into a knowledge-based society. To promote the quality and relevance of education, improve sectoral and institutional governance, and encourage research, for example, MoEYS has embarked on a number of key projects such as Secondary Education Improvement Project (SEIP), General Education Improvement Project (GEIP), Higher Education Quality and Capacity Improvement Project (HEQCIP), and Higher Education Improvement Project (HEIP) (Heng & Heng, 2023; Heng & Sol, 2021). In higher education, HEQCIP and HEIP are the major projects that receive assistance and loans from the World Bank. Valued at USD115.5 million in total, these projects have made significant improvement to Cambodia's higher education sector, particularly in terms of infrastructure development, capacity building, and research (Heng, 2020b; Heng & Sol, 2021).

Challenges to realizing Cambodia's development vision

Challenges to higher education development

After gaining complete independence from France in 1953, Cambodia embarked on developing its education system, higher education seeing relative growth during the Sangkum Reastr Niyum (People's Socialist Community) under the leadership of Prince Norodom Sihanouk from 1955 to 1970 despite shortcomings in financing and education quality (Pit & Ford, 2004). Following that, the development of higher education in Cambodia suffered horrendously from prolonged civil wars, the Khmer Rouge regime, and the subsequent need to get the basic education system to function once again (Ahrens & McNamara, 2013). In the late 1990s, Cambodian higher education began to develop again when privatization was introduced in 1997, triggering a quick rise in both the number of HEIs and student enrolment (Un & Sok, 2018). However, along with this rapid expansion, numerous challenges have continued to hinder Cambodian higher education from flourishing.

One of the key challenges to the development of Cambodian higher education is the limited public funding (Dahles, 2017; Hayden, 2019; Mak et al., 2019a). It was reported that regionally, Cambodia was one of the countries that invested the least in its higher education sub-sector (Mak et al., 2019a). It was further reported that Cambodia's public funding for higher education was only about 10% to 20% of the yearly expenditure of large public HEIs, although the percentage could be higher for smaller HEIs in the provinces (Mak et al., 2019a). Because of this meager public funding, most HEIs in Cambodia rely heavily on income from students' tuition fees (Heng, 2021; Ros & Sol, 2021). With such limited public funding, improvements in institutional resources and facilities are severely hampered, significantly affecting the quality of Cambodian higher education (Hayden, 2019; Mak et al., 2019a).

Another vital challenge to the development of Cambodian higher education concerns the limited qualifications of lecturers/instructors. It was reported that the average post-secondary education held by most Cambodian lecturers was about 5.5 years (Williams et al., 2014). This limited post-secondary education of Cambodian lecturers is a crystal clear indication of their insufficient qualifications to perform teaching and conduct research at the higher education level, which is regarded as of fundamental importance to enhancing the quality of Cambodian higher education. The latest Education Congress report also pointed to the limited qualifications of Cambodian lecturers. Among 16,438 higher education staff (3,518 females), 24.01% hold bachelor's degrees, 67.24% hold master's degrees, and only 8.74% hold PhDs (MoEYS, 2022). While only a small number of higher education lecturers hold PhDs, some reports explicitly expressed concerns over the quality of some locally earned doctorates due to loose quality control, regulations, and enforcement (Heng, 2021; Thun, 2021). This situation was referred to as "PhD inflation" (Thun, 2021).

In terms of higher education governance, there is an issue with the fragmentation of the system. According to the latest Education Congress report, there are now 130 HEIs in Cambodia, of which 82 are privately owned. These HEIs are, however, under the supervision of 14 different ministries and two state institutions (MoEYS, 2022). This situation indicates severe fragmentation of higher education governance in Cambodia. Mak et al. (2019b) asserted that such fragmented governance did not provide enabling conditions to ease meaningful interventions and investments in Cambodian higher education to support national development. Furthermore, cooperation and collaboration across those governing ministries and institutions appear to be limited, and a regular mechanism for such dialogue seems nonexistent (Mak et al., 2019b).

Other critical challenges to higher education development in Cambodia include, among others, limited research capacity and outputs (Eam, 2015; Heng et al., 2022a, 2022b), lack of institutional autonomy (Chet, 2009; Hayden, 2019), inadequate resources (Dem, 2017; Hayden, 2019), poor salaries for academic staff (Heng et al., 2022b; Ros & Oleksiyenko, 2018), limited academic freedom (Chet, 2009; Heng, 2020a); limited professional development opportunities (Doeur & Heng, 2023; Ros & Oleksiyenko, 2018), and lack of stakeholder involvement and collaboration (Sam & Dahles, 2017).

Challenges to research development in Cambodian higher education

Despite some noticeable developments in research in Cambodia over the past decade (see Heng & Heng, 2023; Heng & Sol, 2021), many challenges remain, limiting the development of research in Cambodian higher education. In spite of a growing body of literature on academic research development in Cambodia (see Heng & Sol, 2021 for a review), it is worth examining several studies to provide a big picture of the research landscape in Cambodia in general and in the higher education sector in particular.

Kwok et al.'s (2010) study pointed out a number of broad challenges hindering research development in Cambodia, ranging from a general lack of research culture and capacity in many universities to the absence of a clear research policy and institutional mechanisms to support and promote faculty research. Another study by the Cambodian Institute for Cooperation and Peace ([CICP], 2016) found similar challenges to research development in Cambodia. Some of them included a shortage of competent local researchers, insufficient research infrastructure and funding, and limited research freedom on critical social issues.

MoEYS (2021) also recognized some key challenges to research development in Cambodia, including the shortage of full-time faculty members, the low number of faculty members with doctoral qualifications, limited investment in research and faculty resources, and the lack of capacity and experience in conducting research and writing research papers for publication among faculty members. Moreover, Ros et al.'s (2020) study emphasized that the lack of research funding, infrastructure, and heavy workloads among Cambodian academics were key barriers to research endeavors.

Heng et al.'s (2022a, 2022b) recent studies have also identified some key barriers to research engagement in Cambodia. They included a heavy focus on teaching among Cambodian academics due to low salaries, the absence of well-defined academic career pathways linked to research productivity, an uncondusive research environment, a lack of meaningful nexus between teaching and research, and a general lack of national research culture. Likewise, Heng and Sol (2022) emphasized three key challenges facing Cambodian higher education, namely prevalent skills mismatches, limited research activities and productivity, and fragmented higher education governance.

Methodology

Research design

This study was designed as a qualitative case study, informed by constructivism which sees knowledge and reality as multiple and socially constructed (Crotty, 1998). In other words, knowledge and reality can be created by a dynamic interaction between the researcher and the research participant.

The present study employed two methods of data collection: in-depth interviews and document analysis. The interviews were conducted by an online mode, with students enrolled in bachelor's and master's degree programs in both public and private universities in Battambang, Siem Reap, and Svay Rieng. In addition, relevant policy documents, such as the Policy on Higher Education 2030, the Education Strategic Plan 2019-2023, the Higher Education Strategy 2021-2030, among other documents, were reviewed to gain a better understanding of the phenomenon under study.

Research settings and participants

This study involved the student participants from three universities located in Battambang (University A), Siem Reap (University B), and Svay Rieng (University C). The university in Siem Reap was a private university. The participants were bachelor's and master's degree students. There were a total of 21 students who participated in the interviews, 14 of which were conducted online via Zoom. Among them, there were seven females, 14 males, 11 bachelor's degree students, and 10 master's degree students. Seven students were in science-related majors (e.g., Agriculture, Engineering, Information Technology), while 14 were pursuing social science majors (e.g., Business Administration, Banking and Finance, English). A summary of the participants' profiles is provided in Table 1.

Table 1. *Participants' profiles*

No.	Participants	Gender	Degree program	Major	Location of universities	Type of universities
1	S1	M	Bachelor	Agriculture	Battambang	Public
2	S2	F	Bachelor	Finance and Banking	Battambang	Public
3	S3	F	Bachelor	Finance and Banking	Battambang	Public
4	S4	M	Bachelor	English	Battambang	Public
5	S5	M	Bachelor	English	Battambang	Public
6	S6	M	Master	Business Administration	Battambang	Public
7	S7	M	Master	Agriculture	Battambang	Public
8	S8	M	Bachelor	Information Technology	Siem Reap	Private
9	S9	M	Bachelor	Information Technology	Siem Reap	Private
10	S10	F	Master	Business Administration	Siem Reap	Private
11	S11	F	Master	English	Siem Reap	Private
12	S12	M	Master	English	Siem Reap	Private
13	S13	M	Master	English	Siem Reap	Private
14	S14	M	Master	English	Siem Reap	Private
15	S15	F	Bachelor	Accounting	Svay Rieng	Public
16	S16	M	Bachelor	Agriculture	Svay Rieng	Public
17	S17	F	Bachelor	English	Svay Rieng	Public
18	S18	M	Bachelor	English	Svay Rieng	Public

19	S19	M	Master	Agriculture	Svay Rieng	Public
20	S20	M	Master	Agriculture	Svay Rieng	Public
21	S21	F	Master	Business Administration	Svay Rieng	Public

Data collection

Two methods of data collection were employed in this study: document analysis and semi-structured interviews. Key policy documents on higher education and research were collected and reviewed. These included the Policy on Higher Education 2030, the Education Strategic Plan 2019-2023, and the Higher Education Strategy 2021-2030, among others. As for the interviews, initially, 30 students enrolled in bachelor's, master's and doctoral programs were to be recruited for one-on-one interviews; however, due to time constraints of the researcher and the difficulty in approaching potential participants in the provinces, only 21 students pursuing bachelor's and master's degrees were interviewed.

There were seven face-to-face and 14 online interviews. The online interviews were conducted and recorded using Zoom video conferencing. The physical interviews were recorded using a smartphone (Oppo R11). All interviews lasted between 20 and 50 minutes and were carried out in Khmer, the native language of both the researcher and research participants. The interviewee recruitment process was mainly conducted via Facebook Messenger and Telegram, common methods of communication among many people in Cambodia. It should be noted that the participants were well-informed about the purpose of the study and were explained about how the data, including their personal information such as gender and age, would be used in the study. Consent forms were used, and efforts were taken to conform to the general ethical standards in social science research as discussed by Israel and Hay (2006).

Data analysis

The policy documents collected were reviewed, while the recorded interviews were transcribed and directly translated into English by the researcher who is bilingual. The transcripts were then transferred to NVivo 12 for data coding and analysis. The data analysis involved both deductive and inductive coding, and Braun and Clarke's (2006) thematic analysis was used for this purpose. The process consisted of six steps, including (1) familiarizing oneself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. Based on the analysis, three key themes in reference to the research questions were identified: (1) Cambodian university students and the concept of knowledge-based society; (2) Cambodian universities and knowledge-based society; and (3) Cambodian university students and their preparation for knowledge-based society.

Findings

Cambodian university students and the concept of knowledge-based society

The data analysis showed that Cambodian provincial university students who participated in this study had positive perceptions about the concept of knowledge-based society. They expressed positivity toward Cambodia's vision to transform itself into a knowledge-based society. They particularly applauded the vision to develop into a knowledge-based society. As the following quotes illustrate, the participants appeared to share similarly positive views about Cambodia's aspirations to become a knowledge society.

I think it's a great vision. The world is becoming more globalized. We need to develop ourselves to become a knowledge society, not rely only on natural resources that will be done one day. (S1)

It is important that our country thinks about becoming a knowledge-based society. With this vision, we know where we are going, and we should try to achieve this ambitious goal. I think it's great. (S11)

For me, I think it is a great vision that should be commended. We used to be a great nation in the past. We need to strive for knowledge as knowledge will help us to compete with other countries in the world. (S20)

When asked whether they had ever heard the term 'knowledge-based society,' some of them said 'Yes,' while several, surprisingly, revealed that they had never heard of the term. For example, a few participants said that they had never heard of the term knowledge-based society whether in Khmer or English. One of them said:

I've never heard of this term. I just heard about it when you invited me for the interview. (S8)

Another participant similarly said that she had never heard of the term:

I just heard about this term today. I've never heard about it before. (S2)

Other student participants shared that they had heard of the term knowledge-based society before, particularly through joining workshops and/or social or educational events. The following conversation excerpts illustrate this point:

Conversation excerpt 1

Researcher: Have you ever heard the term "knowledge-based society"? How and when did you hear about it?

S5: I have heard about it before. I heard about it when I joined a workshop organized by one NGO. One speaker talked about this term.

Conversation excerpt 2

Researcher: Have you ever heard about the term "knowledge-based society" before?

S11: Yes, I heard about it a few years ago when I participated in a seminar. It was about digital education.

The data also showed that the participants seemed to have a superficial understanding of the concept of knowledge-based society; that is, they only knew that term is associated with the word ‘knowledge,’ as the name of the term suggests, but were hardly able to provide an extended definition of the term. For example, one of the participants said the following when asked to define the term knowledge-based society:

I am not sure, but I think it means a society that depends on knowledge. As the term suggests, knowledge must be important in such a society. (S4)

Another student (S16) frankly revealed that he believed the concept of knowledge-based society is “a society that is based on knowledge,” referring to the name of the term. He added:

I think in a knowledge-based society, the focus is on knowledge and educated people. We use knowledge to create new things and the development in society depends on the knowledge we have. (S16)

Overall, the participants appeared to have a limited understanding of the term knowledge-based society, believed that knowledge played a pivotal role in a knowledge society, and felt positive toward Cambodia’s aspirations to become a knowledge-based society.

Cambodian universities and knowledge-based society

The participants were also asked to provide their perspectives on the role of universities in a knowledge-based society. They mentioned a few keywords that resonated across the interviews. Some of these keywords included knowledge, education, research, educated people, universities, and human resources. They emphasized that in a knowledge-based society, the citizen should be highly educated and have the necessary knowledge and skills to contribute to economic development. Without an educated workforce, it would be hard, if not impossible, to develop into a knowledge-based society. The participants’ perspectives are reflected in the following quotes:

Universities play a vital role in preparing students for a knowledge-based society. They provide students with the necessary skills and knowledge to thrive in such a society. (S12)

In knowledge-based society, education is important. Without a good education system that makes people knowledgeable, it will be hard to develop a society into a knowledge-based society. So, we need a good education system and more educated people to become a knowledge-based society. (S14)

When asked about the role of Cambodian universities in supporting Cambodia’s aspirations to become a knowledge society, the answers were mixed and, at times, contrasting. In other words, while some participants felt positive about the development of higher education and universities in Cambodia, others expressed doubts about the contributions of Cambodian universities to the development of a knowledge-based society in Cambodia. One participant

expressed his positivity toward the recent developments in Cambodian higher education as follows:

I think our higher education is now much better. The Ministry of Education has done a lot to improve the sector. I have seen a lot of activities and projects that are implemented to promote the quality of higher education. (S19)

Other students also acknowledged the recent progress in teaching and research in Cambodian higher education:

There is a lot of progress in higher education in Cambodia. Although there are still challenges, I think we are much better if compared to the past. Some universities are good. They can teach students to become knowledgeable and compete with students in other countries. (S7)

In terms of research, I think there is some good progress. I have read your articles. There are new journals and some projects that the Ministry of Education implements to promote research and innovation. (S13)

Despite their positive perceptions, the participants also mentioned issues and challenges that continued to constrain the development of higher education in Cambodia. Their views of the challenges were similar, highlighting key issues in Cambodia's higher education. For example, a few of them raised the issue of skills mismatches among university graduates, while other participants emphasized the lack of focus on quality education and research. One participant said the following:

One of the main problems is the skills mismatches. Many students work in jobs that are not really aligned with their majors. They just get the job to earn an income to support themselves and their family. (S12)

Other interviewees touched on the issues of unequal access to higher education; limited teaching and learning facilities; and limited opportunities for practical experience. As one participant, for example, said:

I think we face a lot of issues, such as lack of facilities to support our study. There are also limited learning opportunities or workshops compared to the city. Luckily, due to COVID-19, I can attend a lot of workshops or seminars online. (S21)

Overall, the students' perceptions of the role of Cambodian universities in supporting Cambodia's aspirations to become a knowledge-based society were ambivalent. They expressed both optimism and pessimism, revealing the developmental stage of higher education in Cambodia in which progress and challenges are inextricably intertwined with each other in the current context.

Cambodian university students and their preparation for knowledge-based society

The student participants were asked to talk about the main challenges facing them in preparing themselves for striving in a knowledge-based society. In other words, they were invited to talk about their challenges as provincial university students. Key challenges mentioned were similar

across the interviews; however, there were also unique challenges faced by individual students. The common challenges included limited access to learning resources and support; limited ability to identify opportunities available to them; insufficient opportunities for training and professional development; limited exposure to technology; and limited opportunities to improve their English proficiency; and lack of practical experience. The unique challenges faced by individual students included financial barriers; family responsibilities; sociocultural barriers (including gender expectations or norms); and issues related to the distance between home and university. Key challenges are summarized in Table 2.

Table 2. *Key challenges facing Cambodian provincial university students*

No.	Key challenges	Quotes from the participants
1	Limited access to learning resources and support	It's hard to find support for my study, and the study resources are limited for universities in the province. (S15)
2	Limited ability to identify opportunities	I don't know much about workshops or seminars offered by my university and other universities. I don't really have much information about opportunities for extra learning. (S16)
3	Insufficient opportunities for training and professional development	There are not many opportunities for training or professional development here. Maybe there are but I don't have information about them. But I believe there are not many opportunities like in the city. (S12)
4	Limited exposure to technology	I think there are not many opportunities to improve our technological skills here. There is a lack of resources in both human resources and technology. (S17)
5	Limited opportunities to improve their English proficiency	My English is limited, so I find it hard to do the assignments. I want to improve it but I don't know how and I can't find any opportunities to improve it. (S1)
6	Lack of practical experience	I think the key challenge for me is I don't have enough practical experience. I didn't have time to engage in other activities such as internships or voluntary work. I also don't know much about how to gain practical experience related to my major. (S3)
7	Financial barriers	A key challenge facing me is financial barriers. I have to work to earn an income to support my family. I'm a breadwinner so I focus on work rather than study. (S19)
8	Family responsibilities	I need to support my family, so I don't have much time for study. (S10)
9	Sociocultural barriers	As a woman, it's not easy to study to a high degree. I face a lot of issues related to gender. Many people in my village don't encourage women to study a lot. (S11)

10	Geographical barriers	My house is far from my university. I find it hard to travel back and forth but I have no choice. I need to work hard. (S18)
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The students were also asked to provide suggestions for relevant stakeholders (e.g., the government, the private sector, HEIs, educational institutions, NGOs, and so on) to support them and other Cambodian students in their preparation for a knowledge-based society. Their suggestions focused on various aspects ranging from improving the quality of education to providing them with plenty of opportunities to gain practical experience and to improving their knowledge and skills for the job market.

One of the common suggestions from the student participants, for example, was about promoting education quality. As S6 said, “It is very important that we try to promote the quality of education. With good education, our citizens will be educated people who can contribute to developing our country.” This comment highlights a serious problem when it comes to the quality of education in Cambodia, as reflected in the comments of other participants:

To help university students, the government and concerned stakeholders need to find ways to improve the education quality. There are a lot of students who graduate and work in jobs not relevant to their majors. I think this is a big issue. (S12)

A knowledge-based society is a society that focuses on knowledge. So, I think it’s important to ensure people can get knowledge, skills, and ability to use knowledge to develop the country. To achieve this, we need to improve our education system. (S20)

Another suggestion was to offer opportunities for students to have practical experience. Many students in provincial universities seemed to lack the opportunities to be involved in various opportunities that could improve their knowledge and skills, including soft skills. As highlighted in a comment by one student (S9), students in provincial universities did not have sufficient opportunities to enhance their practical knowledge and skills because most of the extracurricular activities or other learning opportunities tended to be offered in the city. He said:

I think all stakeholders should try to provide sufficient opportunities for students, particularly those in the provinces, to gain practical experience and develop knowledge and skills that are not provided in universities. There are not many opportunities for students in the provinces, so there must be more support for them. (S9)

The participants also made suggestions on the need to help students develop their knowledge and skills required for the job market. They tended to highlight the issue of skill mismatches and the problem of not learning sufficient knowledge that could ensure appropriate employment after graduation. For example, one participant commented:

Universities need to ensure that students are equipped with the necessary knowledge that they can use after graduation. They need to have knowledge about their major and also

knowledge about other things such as English, IT (informational technology), and soft skills. (S14)

Overall, the students' suggestions on how concerned stakeholders should do to support Cambodian provincial university students and other Cambodian students in general in preparing for a knowledge-based society tended to center on the need to improve the quality of education and the importance of providing them with the necessary knowledge and skills for striving in the job market. These findings have important implications for policymakers, educational institutions, and other key stakeholders in Cambodian higher education.

Discussion

This study showed that Cambodian provincial university students had a limited understanding of the concept of knowledge-based society. Their superficial understanding of the term revealed their limited exposure to learning opportunities outside the university setting as well as their limited opportunities to engage in various educational opportunities such as workshops, forums, and/or events, among others. The findings also indicated that participation in extracurricular activities such as workshops, seminars, and other educational activities provided students with important opportunities to develop their knowledge and skills as well as gain practical experience, generally not available in university settings. This has implications for universities to provide student with the opportunities to develop their knowledge beyond what is available in universities. As Aliu and Aigbavboa (2021) found in their review of the roles of extracurricular activities, participation in out-of-school activities was vital to developing students' employability skills.

The present study, moreover, revealed that Cambodian provincial university students had ambivalent attitudes toward Cambodia's vision to become a knowledge-based society. Although they felt positive about this admirable vision, some of them did not see how such a vision could be realised in the foreseeable future. This shows their awareness of the current state of development of Cambodian higher education and the need to improve the sector to ensure that the country could successfully transform itself into a knowledge-based society. These findings are in line with a recent qualitative study by Heng (in press) who also investigated Cambodian university students' perspectives on Cambodia's aspirations to become a knowledge society. Although Heng's study focused on students in the city, the findings were similar to those of the present study, as it was found that Cambodian university students based in the city rated the contributions of Cambodian universities to building a knowledge society to be moderate, with a few believing that the contribution was below 50%. These findings should be further investigated to provide a better understanding why students believed in this way.

In addition, the present study showed that Cambodian provincial university students faced a variety of challenges ranging from limited access to learning resources to limited opportunities for gaining practical experience and limited exposure to technology and extracurricular or training opportunities. There were also other challenges that may be unique to provincial

university students, placing them at the disadvantaged end when it came to taking full advantage of educational opportunities. These findings confirmed those of Chea (2019) who found that “young adults from disadvantaged groups are less likely to reap the benefits from the higher education expansion” (p. 4) in Cambodia. This study’s findings also corroborate those of Heng (2023) who investigated Cambodian youth’s engagement in the knowledge sector and found various challenges affecting their engagement, including a lack of conducive environment for research. Likewise, these findings confirm observations made by Soth (2022) who indicated that Cambodian students in provincial or rural areas faced many challenges, including a lack of access to information, lack of learning resources, and limited opportunities to develop practical knowledge and soft skills.

Overall, the findings of this study provided an understanding of how Cambodian provincial university students perceived Cambodia’s vision to become a knowledge-based society. While the students’ knowledge of the term ‘knowledge-based society’ was limited, they expressed optimism regarding their country’s vision for becoming a knowledge society. However, they also expressed their concerns over the various challenges affecting Cambodian higher education, showing their understanding of the current developments of the sector. The challenges that the students faced and the suggestions they made provide a basis for further investigation and close academic and/or policy attention, particularly in light of the significant role of young people and higher education in a knowledge society.

Conclusion and implications

This study has examined Cambodian university students’ perspectives on Cambodia’s aspirations to become a knowledge-based society. Drawing on interview data and document analysis, the study has shown that Cambodian university students who participated in this research had a superficial understanding of the term knowledge-based society, with some having never heard of the term before; however, they had positive perceptions about their country’s vision to develop into a knowledge society. This study has also found a mixed view regarding the contributions of Cambodian universities to realizing Cambodia’s knowledge society vision; that is, while some students felt positive about the recent developments in Cambodian higher education, others expressed concerns about the various issues (e.g., skills mismatches, limited education quality, limited research activities) affecting the higher education sector in Cambodia. In addition, the study has revealed the challenges facing university students in provincial Cambodia in preparing themselves to participate in a knowledge society. Key challenges that were identified included a lack of access to learning resources and opportunities, limited exposure to technology and opportunities to improve their English as well as other hard and soft skills, and limited opportunities to gain practical experience. There were also other challenges caused by financial barriers, family responsibilities, and sociocultural barriers.

This study points to an important issue in Cambodian higher education, that is, the gap in the provision of education quality and opportunities for students in the city and those in the

provinces. Although this study does not aim to compare the quality and/or opportunities available to students studying in the city and provincial towns, the findings have shown that those who are based in the provinces tend to have fewer opportunities when it comes to learning, personal and professional development, development of soft skills or technological skills, and other extracurricular learning opportunities.

These findings have important implications for policy and practice. For policy, it is essential that policymakers and key higher education stakeholders such as international organizations pay greater attention to bridging the gap in the provision of education quality and opportunities for students in the city and the provinces or rural areas. It is crucial to provide additional support, whether financial or technical, to the students based in disadvantaged or less advantaged areas so that they can be sufficiently supported and empowered to develop their knowledge, skills, and capacity needed to participate meaningfully in their community and society. For practice, it is imperative that Cambodian universities in particular and HEIs in general as well as other concerned stakeholders across different levels begin to seriously tackle the remaining issues and challenges facing Cambodian higher education. As Cambodia is envisioning to become a knowledge society where knowledge is a key driver of socioeconomic growth and sustainable development, it is necessary to ensure that university students, particularly those in provincial or rural areas, be given ample opportunities to develop themselves to become quality human capital that can drive Cambodia toward achieving its knowledge society vision and other development visions such as the vision for becoming an upper-middle-income country and high-income country by 2030 and 2050, respectively.

As this study has shown, university students still have doubts regarding the contributions of Cambodian universities to realizing the country's vision; therefore, it is time for key higher education stakeholders, especially the government, to direct their attention to ensuring the quality of higher education and the provision of education and learning opportunities for all university students, particularly those in rural or disadvantaged areas. It is only when university students are adequately supported and given opportunities to develop themselves personally and professionally, can they become an engine for socioeconomic development, helping their country to realize its development visions.

This study, albeit being one of the first studies of its kind, is not without limitations. First, doctoral students were not included in the data collection although it was initially planned that all the three levels of university students would be recruited for in-depth interviews. Second, only three universities in the provinces are included in the study, leaving the perspectives of Cambodian students in other provincial universities and/or university in the capital city not represented in this study. Third, this study only employed semi-structured interviews and document analysis for data collection, making the findings limited to this research design and data collection methods and should be interpreted with caution. Considering these limitations, it is suggested that future researchers should address the shortcomings of the present study and conduct research to further explore this phenomenon quantitatively, qualitatively, or both, using a mixed-methods design. More research is indeed needed to bring the perspectives of university students in a developing country, such as Cambodia, to the wider academic

community, so there will be more insights and deeper understanding of the conditions and realities of higher education in such an academically underrepresented context.

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