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# Sustainability Practices of Higher Education Institutions in Hong Kong: A Case Study of a Sustainable Campus Consortium

Weiyan Xiong and Ka Ho Mok \*

School of Graduate Studies, Lingnan University, 8 Castle Peak Road, Tuen Mun, New Territories, Hong Kong; weyanxiong@ln.edu.hk

\* Correspondence: kahomok@ln.edu.hk; Tel.: +86-3-2616-8288

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**Abstract:** Eight University Grant Committee (UGC)-funded public universities in Hong Kong positively and successfully responded to the global call for sustainability efforts in higher education institutions (HEIs). Various initiatives are transpiring within these eight campuses. The Hong Kong Sustainable Campus Consortium (HKSCC) was co-established by eight UGC-funded universities, which is an excellent example of integrating resources and efforts to achieve sustainable development goals and exert positive social impacts. Through interviews with HKSCC administrators and members and reviewing relevant documents, this study aims to examine the roles and challenges of HKSCC toward Hong Kong HEIs' sustainability efforts, and present the good practices and achievements of HKSCC. Findings of this study reveal that although HKSCC and each UGC-funded university contribute in reaching the sustainability goals, they should pay considerable attention to the external impact of sustainability practices on communities and society. Moreover, we propose that the sustainable development of public universities in Hong Kong should look beyond the narrowed definition of sustainable development and broaden their roles to exert a social impact by addressing the negative consequences of the massification, privatization, and internationalization of higher education.

**Keywords:** sustainability practices; United Nations Sustainable Development Goals; Hong Kong public universities; case study; UGC-funded universities

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## 1. Introduction

In recent decades, higher education in Asia has experienced several major development trends. Examples of these trends are the massification and privatization of higher education, thus promoting world-class university status by asserting a presence in different global league tables and engaging in internationalization [1,2]. However, all these “zations” have inevitably drawn resources not only from the state but also from other non-state sectors to concentrate their support toward enhancing only a select few of the top national universities to become globally competitive and even become front-runners. Without unlimited resources, higher education institutions (HEIs) in East Asia face the issues of sustainability not only from the United Nations Sustainable Development Goals' (UN SDGs) perspective but also from a financial sustainability perspective [1].

At the level of HEIs, sustainability practices remain in the early stage [3]. University administrators and sustainability practitioners are exploring appropriate ways to integrate sustainability into institutional missions, strategies, curriculum, and daily operations. HEIs are practicing different models of sustainability, including centralized “top-down” national policies (such as Mainland China universities) [4], de-centralized “bottom-up” institutional voluntary

practices (like Hong Kong universities), and individual institutional efforts and collective practices. Given the distinguished political and educational contexts, determining which model of sustainability practices is optimal for HEIs is difficult. Therefore, researchers and practitioners should pay attention to case studies on different sustainability practices [5].

HEIs commonly emphasize the environmental goals rather than social and financial goals when applying international/regional assessment tools to evaluate their sustainability efforts. For example, the assessment tools of Alternative University Appraisal on Education for Sustainable Development, which are applied in the Asia Pacific region, do not cover social responsibility and management issues, whereas the environmental sustainability evaluation tool for Spanish universities is highly oriented toward environmental management [6]. In this sense, a discussion on how sustainability practices should go beyond the narrow definition of sustainable development from the environmental perspective is urgent.

Against the wide political economy context, and responding to the demands of case investigation of sustainability practices in HEIs, this article critically examines how the eight University Grant Committee (UGC)-funded public universities in Hong Kong respond to the UN SDGs by using collective efforts to assess the policies and selected practices adopted to achieve and promote the sustainable development advocated by the UN. This article also argues that the promotion of UN SDGs should go beyond sustainability accounting and practices. If universities truly embrace the UN SDGs, then the university governance warrants fundamental transformations. Such transformations should create an ecosystem for achieving the SDGs beyond the narrow definition of sustainability to a broad notion of sustainable development, which would involve addressing the negative consequences of the massification, privatization, and internationalization of higher education. Developing resilience and risk management is becoming increasingly important toward enhancing sustainability in university governance [1].

### 1.1. Introduction to Hong Kong Sustainable Campus Consortium (HKSCC)

On 18 May 2010, vice chancellors and vice presidents from eight UGC-funded public universities in Hong Kong signed the *Hong Kong Declaration* to recognize the vital role of the higher education sector in the efforts to deal with the challenges caused by climate change and to include the collective voices from Hong Kong public universities in the global sustainability community [7]. The Declaration emphasizes the integration of sustainability in their missions, teaching, research, knowledge transfer, and community engagement. At the operational level, the Declaration commits eight Hong Kong universities to reviewing their campus operations to meet the targets for the reduction of energy consumption, greenhouse gas emissions, water use, and waste, including the incorporation of sustainability issues in curricula. Finally, the Declaration suggests a regular reporting scheme on the eight universities' performance [7].

Guided by the Declaration, the HKSCC was established by the Heads of Universities Committee (HUCOM) on 3 November 2010, to serve as a sharing platform for the sustainability efforts among eight UGC-funded universities and to coordinate the collaborations involving governments, businesses, and civil society [7]. The eight universities choose two senior administrators to serve as the Convenor and Secretariat every year. In 2019, the convenorship transferred from Lingnan University to the University of Hong Kong and the second eight-year cycle of the HKSCC began. Under the convenorship there are three working groups, one of which is the "Working Group on Sustainability Performance", which was established in 2015 to guarantee that HKSCC member universities achieve sustainability goals. The second is the "Working Group on Joint University Campaigns", which is a self-generated task force by the passionate HKSCC members to promote sustainability activities across eight university campuses. The last task force is the "Working Group on Sustainability Education", which aims to promote sustainability education inside and outside university campuses [8,9]. Currently, 37 staff members from eight universities are engaging the work of HKSCC as either university representatives or working group members.

Since its foundation, HKSCC has carried out projects and activities to promote the role of Hong Kong universities in sustainable development. Table 1 presents the major HKSCC projects and events.

**Table 1.** Major Hong Kong Sustainable Campus Consortium (HKSCC) projects and events.

Time	Project/Event	Covering Sustainable Development Issues
19 June 2015	China Green Campus Forum	HKSCC serving as the supporting organization to raise sustainability awareness of higher education sector and the community
31 October 2015	HK Tertiary Schools Conference of Parties (COP) 21 Challenge	The first event held by HKSCC for all tertiary institutions in Hong Kong to raise sustainability awareness of the higher education sector
2016	Inter-Institutional Purchasing Liaison Group (IPLG)	Implementing sustainable purchasing
2016	Joint Universities Computer Centre (JUCC)	Implementing sustainable IT practices
12–16 March 2018	Joint Disposables Campaign - UNIfy: Skip the Straw	First joint-university disposables campaign to raise sustainability awareness in the higher education sector
2019	Joint Disposables Campaign - Bring Your Own Week	Raising sustainability awareness of the higher education sector
Through out	Dialogue with the Environment Bureau of Hong Kong Government	Major way of communicating with the Hong Kong government on the sustainable development efforts of the higher education sector

Sources: HKSCC annual reports [9–12].

### 1.2. Research Objective and Research Questions

This research was conducted in a context in which universities are under intense pressure to improve their sustainability and risk management efforts. This case study of the HKSCC aims to present the collective efforts of the Hong Kong public higher education sector in creating sustainable campuses and exerting their influences in the promotion of the sustainable development of Hong Kong society. Through semi-structured interviews with HKSCC members and text analysis of relevant HKSCC documents, this study addresses the following research questions.

1. What roles does HKSCC play?
2. What are the exemplary sustainability practices of HKSCC?
3. What are the challenges faced by HKSCC in promoting sustainability practices?

After addressing these three descriptive questions, this study aims to stimulate discussion regarding the roles, challenges, and practices of HKSCC to answer the question “how should the HKSCC achieve further development in the future?” In addition to the perspectives from interviewees on the future development of HKSCC, we investigated the general higher education contexts in Hong Kong, including a comparison with sustainability practices of other countries’ HEIs. The final discussion intends to provide not only recommendations for the further development of the HKSCC but also insights into sustainability practices in other higher education sectors.

## 2. Literature Review

### 2.1. Sustainability Accounting in Higher Education Institutions

Also known as social or environmental accounting, or sustainability or non-financial reporting, sustainability accounting has become a management tool applied by companies to become more sustainable not only in finance but also in environmental and social aspects. Sustainability accounting has been a well-developed accounting framework used to demonstrate the economic, social, and environmental impact of a company's business activities. Sustainability accounting is significant for a company's development because it is relevant to practicing its social responsibilities, which will promote its reputation and increase its financial profits [13].

Even though sustainability accounting remains in the early stage in the higher education sector [3], the significance of HEIs for sustainable development is widely recognized by governors, policymakers, and researchers [14–18]. On the one hand, certain countries and regions have implemented policies and established networks to integrate HEIs into the efforts of reaching sustainable development goals [19]. On the other hand, academics and researchers are exploring the means of promoting sustainable development through different levels of education. For example, the theme of the 2019 annual conference of the Comparative and International Education Society (CIES) in the US is "Education for Sustainability", which indicates that "education is integral to the four pillars the UN regards as supporting sustainability: inclusive social development, inclusive economic development, peace and security, and environmental sustainability" [20] (p. 2).

HEIs promote sustainable development in two primary ways—through sustainability education and through sustainability governance within the campus. Sustainability education aims to cultivate future leaders, experts, advocates, and teachers for the sustainable development of future societies. Also, sustainability education involves promoting sustainability knowledge to communities through community engagement activities. Moreover, HEIs are also practicing sustainability activities within their campus to reach sustainability goals such as reducing energy consumption and greenhouse gas emissions, and ultimately build "green" or environmentally-friendly campuses [14].

Although integrating sustainability into institutional missions and visions is an overarching goal, sustainability efforts of HEIs cover different aspects, including teaching, research, operations, reporting, knowledge transfer, and governance [14]. HEIs from different countries implemented various collective initiatives or projects to reach sustainability goals [14,21–23]. For example, in Germany, the project "Sustainability in HEIs: Develop-Network-Report, 2016–2018" (HOCH-N Project) was implemented by 11 German HEIs to facilitate sustainable development through "feed[ing] the network and interested HEIs with a shared understanding of sustainability and transformational processes, the identification of fields of action, and useful guidelines" [14] (p. 492). In addition to the network within a country, international networks have also been rapidly developed as strong forces to enhance sustainability practices in HEIs [19].

Despite the increasing recognition of the role of HEIs in sustainable development and the rapid development of international collaboration, the integration process of sustainability into the curriculum has been criticized as being slow, especially compared with advanced policies [24]. Scholars argued that this is because the current organizational structures of HEIs cannot respond swiftly to dynamic external contexts [25,26]. Therefore, HEIs must establish a clear, stable, and flexible structure with learning practices, transdisciplinary approaches, and effective leadership to adapt to changes regarding sustainability, and integrate sustainability into curriculums [6,25]. Although many HEIs have applied sustainability assessment tools to evaluate their performance in sustainability efforts [27], most sustainability efforts remain internally oriented, focusing on meeting sustainability goals and creating environments for sustainability education with insufficient attention on their external impacts [18].

According to Karl Kim, universities nowadays should take sustainability seriously. He argued that "resilience is the new sustainability" [28] (p. 1), signifying that resilience in many specifiable situations amounts to an institution's ability and capability to be sustainable over time in the face of rapid and multiple changes, remaining adaptive and responsive to challenges and threats arising

from uncertain environments. As Deane Neubauer rightly interpreted, “like sustainability, what one ‘does’ at a policy level to create and employ resilience depends on which of several meanings one seeks to impress upon an institutional setting in search of which outcomes” [29] (p. 14). According to the Rockefeller Foundation’s test of resilience, the following core “pillars” support organizational sustainability [30] (pp. 2–3):

- Constant learning
- Rapid rebound from negative occurrences
- Limited or “safe failure”
- Flexibility
- Spare capacity.

The above aspects are particularly important for HEIs to prepare for uncertain circumstances resulting from external challenges and changes [28]. As Kim proposed, HEIs should develop a resilience-based approach to training and education with a focus on “the city”, ensuring that HEIs would be adaptive to the changing development needs of the city. Second, HEIs must adopt an informed perspective of collective risk management. Third, making resilience part of the innovation economy would be an essential dimension for HEIs’ development strategies/priorities [28]. With a clear understanding of sustainability and proper preparation for resilience, HEIs in global cities would become adaptive and proactive in managing rapid socio-economic, political, and cross-cultural changes.

## 2.2. Sustainability Practices in Hong Kong Higher Education Institutions

This study uses the above conceptual framework to analyze how Hong Kong universities assess and manage sustainability and resilience-related matters. Moreover, Hong Kong HEIs practiced sustainability accounting. A review of the institutional websites of the eight UGC-funded public universities shows that most of them have established sustainable development offices to coordinate sustainability efforts and promote sustainability education in their campuses. Some of these universities have attended international sustainable development networks and received external evaluations to enhance their performance. Table 2 shows the current sustainable development offices or related units within the eight UGC-funded universities, including the regional and international networks they have attended.

**Table 2.** Sustainability offices/units of UGC-funded Hong Kong universities and attended sustainability networks.

UGC-funded University	Sustainability Office/Unit	Number of Staff	Staff Roles and Student Engagement	Attended Sustainability Networks
University of Hong Kong	Sustainability Office <sup>1</sup>	5	<ul style="list-style-type: none"> <li>• One office head</li> <li>• Two project managers</li> <li>• One sustainability analyst</li> <li>• One administrative officer</li> <li>• <i>Student engagement</i> (three interns and five Green Ambassadors)</li> </ul>	<ul style="list-style-type: none"> <li>• Association for the Advancement of Sustainability in Higher Education (AASHE)</li> <li>• HKSCC</li> <li>• International Sustainable Campus Network (ISCN)</li> </ul>
Hong Kong Polytechnic University	Campus Sustainability Office <sup>2</sup>	7	<ul style="list-style-type: none"> <li>• One office head</li> <li>• Four campus sustainability officers for promotion, publicity, and engagement</li> <li>• Two administrative officers</li> </ul>	<ul style="list-style-type: none"> <li>• HKSCC</li> <li>• University Social Responsibility Network</li> </ul>

Chinese University of Hong Kong	Campus Planning and Sustainability Office <sup>3</sup>	13	<ul style="list-style-type: none"> <li>• One office director</li> <li>• Two assistant directors (for campus planning and sustainability, respectively)</li> <li>• Three sustainability officers</li> <li>• Two campus planning officers</li> <li>• Three project management officers</li> <li>• Two administrative officers</li> </ul>	<ul style="list-style-type: none"> <li>• HKSCC</li> <li>• The Hong Kong Chapter of the United Nations' Sustainable Development Solutions Network (SDSN Hong Kong)</li> </ul>
City University of Hong Kong	Sustainability Committee, Office of the Provost <sup>4</sup>	17	<ul style="list-style-type: none"> <li>• One committee chairman</li> <li>• Six ex-officio members</li> <li>• Eight academic representatives nominated by the Deans of colleges/schools</li> <li>• One co-opted member as principal investigator of community of practice for sustainability</li> <li>• One administrative officer</li> </ul>	<ul style="list-style-type: none"> <li>• Arizona State University</li> <li>• Business Environment Council</li> <li>• Care Open Innovation Lab</li> <li>• Connect4Climate</li> <li>• Global Consortium for Sustainability Outcomes</li> <li>• HKSCC</li> <li>• ISCN</li> <li>• Jockey Club Carbon</li> </ul>
Hong Kong Baptist University	Task Force on Sustainable Campus <sup>5</sup>	20	<ul style="list-style-type: none"> <li>• One task force convenor</li> <li>• 17 members including academic and administrative staff members from 15 departments</li> <li>• One student representative</li> <li>• One administrative officer</li> </ul>	<ul style="list-style-type: none"> <li>• The Environmental Campaign Committee</li> <li>• HKSCC</li> </ul>
Education University of Hong Kong	Center for Education in Environmental Sustainability <sup>6</sup>	44	<ul style="list-style-type: none"> <li>• Two center directors</li> <li>• Six coordinators</li> <li>• 33 academic staff members from various departments</li> <li>• Three administrative officers</li> <li>• <i>Student engagement</i> (20 research-track graduate students supervised by center academic members)</li> </ul>	<ul style="list-style-type: none"> <li>• HKSCC</li> </ul>
Hong Kong University of Science and Technology	Sustainability Unit <sup>7</sup>	3	<ul style="list-style-type: none"> <li>• One unit head</li> <li>• One sustainability program manager</li> <li>• One health, safety and environment specialist</li> <li>• <i>Student engagement</i> (20 students serving as eco-reps of the Sustainable Campus Leadership Program)</li> </ul>	<ul style="list-style-type: none"> <li>• AASHE</li> <li>• HKSCC</li> <li>• ISCN</li> </ul>

Lingnan University	Office of the Comptroller <sup>8</sup> ; Science Unit <sup>9</sup>	4	<ul style="list-style-type: none"> <li>• Two HKSCC representatives</li> <li>• One HKSCC working group member</li> <li>• One administrative officer</li> </ul>	• HKSCC
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*Note:* Sustainability office and network information of each university were collected by authors from respective institutional websites.

#### Sources:

1. <https://www.sustainability.hku.hk>
2. <https://www.polyu.edu.hk/cso/en/index.php>
3. <https://www.cpsocuhk.edu.hk/en-gb>
4. <https://www.cityu.edu.hk/sustainability>
5. <https://sustainability.hkbu.edu.hk/index.php/Index/index.html>
6. <https://www.eduhk.hk/cees>
7. <https://green.ust.hk>
8. <https://www.ln.edu.hk/cht/co/about/sustainability>
9. <https://www.ln.edu.hk/scienceunit>

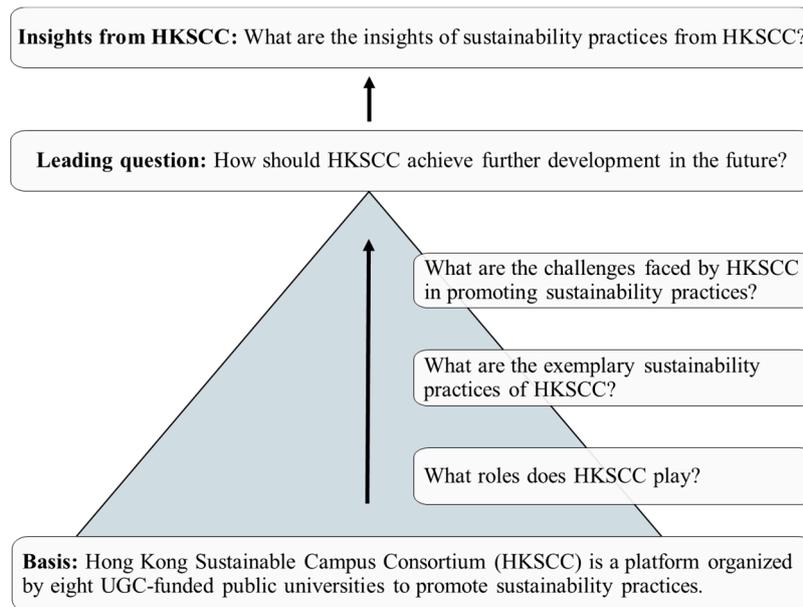
The Hong Kong government encourages sustainability practices in HEIs. The Hong Kong Environment Bureau established the Sustainable Development Promotion Awards to “promote the concept of SD (sustainable development) to local undergraduate students and raise awareness toward the importance of SD and to encourage them to organize projects for applying sustainable practices in daily lives and spreading the messages to their peers, families, and the community” [31].

### 3. Research Design

For an in-depth understanding of the HKSCC on its roles, challenges, and exemplary practices, we conducted a case study to examine these aspects and ultimately demonstrate the sustainability practices used in Hong Kong public universities. As Yin defined, “A case study is an empirical method that investigates a contemporary phenomenon (the ‘case’) in depth and within its real-world context and such an understanding is likely to involve important contextual conditions pertinent to your case” [32] (p. 15). Therefore, the case study approach is an appropriate way to investigate the in-depth and detailed information on HKSCC because of its unique context in the Hong Kong higher education sector. Specifically, the ways of governance, organization, and operation of the HKSCC are rooted in the highly connected public university system in Hong Kong. However, the generalizability of the findings regarding sustainability practices in HEIs derived from the HKSCC case will be a limitation, which should be carefully considered by HEI administrators or sustainability practitioners when referring to HKSCC practices.

#### 3.1. Analysis Framework

Figure 1 presents a pragmatic analysis framework applied in this study. To achieve the final research objective of providing suggestions for the future development of HKSCC, we investigated three aspects of HKSCC, such as its roles, good practices, and challenges. As a case study, we carefully examined the higher education context, which determines the characteristics of the HKSCC and its practices. This case study hopes to present the Hong Kong case and provide insights into the sustainable development communities in higher education.



**Figure 1.** Analysis framework of this study.

Informed by the analysis framework, this article first presents the qualitative findings regarding the roles, exemplary practices, and challenges of HKSCC. Then the discussion section covers the future development of HKSCC and the implications of sustainability practices in higher education derived from the Hong Kong case. In the final conclusion section, the authors highlight the uniqueness of the Hong Kong higher education sector to discuss the possibility and criticalities to avoid when replicating the HKSCC practices in other countries and regions.

### 3.2. Study Participants and Data Collection

We adopted qualitative approaches to collect and analyze data. Semi-structured interviews and text analysis were the primary instruments of data collection. Three interview participants include a former convener of the HKSCC, a university representative of the HKSCC, and a key member of the working group of HKSCC. The contact information of interview participants was retrieved from the HKSCC website. To ensure the confidentiality of interviewees, we assigned them unique codes, namely, “SP01,” “SP02,” and “SP03” (see Table 3).

**Table 3.** Interview participants.

Interviewee	Role in HKSCC
SP01	Former Convener
SP02	University representative
SP03	Member of the Joint University Campaign Sub-Committee

The relevant documents, including the HKSCC annual reports, strategic plan, Hong Kong Declaration, briefings of events and activities, and other related documents, were collected for data analysis. Some of these documents were retrieved from the HKSCC websites, and others were provided by the interview participants.

### 3.3. Data Analysis

The data analysis process follows the research framework, which focuses on the roles, challenges, and good practices of the HKSCC. Moreover, the analysis tries to examine the latent image that the HKSCC can present to Hong Kong society regarding sustainability in the higher education sector. All qualitative data were stored, organized, cleaned, and coded through the NVivo qualitative research software. Through the coding process, we identified themes and sub-themes, which are presented in the following section.

## 4. Findings

In this section, we present the themes derived from the data analysis process to answer the research questions regarding the roles, good practices, and challenges of HKSCC.

### 4.1. Roles of HKSCC

Established under the *Hong Kong Declaration* and eight universities' recognition of their sustainability responsibilities, the HKSCC has no actual power to regulate the sustainability practices of eight universities. Therefore, the HKSCC primarily serves as a sharing platform and advisory organization for the eight participating universities to promote sustainability practices in their campuses, including research, teaching, and knowledge transfers.

The Consortium holds no power and is supported by the leadership of the universities. It has the role recognized by the Hong Kong government and the environment bureau about how to help [the] eight universities work effectively. The Consortium aims to serve as a place of pulling together best practices and encouraging universities to behave sustainably. The universities choose their representatives to work for the Consortium, where communication transpires. (SP01)

In the past eight years, most efforts of the HKSCC were concentrated on the operations side to meet the sustainability goals and standardize the reporting scheme of their annual reports. In this sense, the role of HKSCC as a sharing platform for sustainability information and practices has been enhanced by practices, and other roles in promoting sustainability education and engaging communities through knowledge transfer were largely ignored.

However, interviewees have sensed that the role of the HKSCC has shifted from an advisory role to a leading role in the sustainability efforts in Hong Kong. "We want to do more influential works to exert a positive impact on the communities and society and to solve the actual environmental issues instead of just focusing on sustainability goals. We want to go beyond the campus" (SP02). The interviewee's emphasis on the shift in role is also reflected by the new strategic plan of the HKSCC, which was released in May 2019. "Over the next eight years, the Consortium has the potential to move beyond a platform of sharing to a platform for developing more dynamic and active collaborative sustainability solutions" [8] (p. 1, emphasis in origin).

Furthermore, the shift in role of the HKSCC entails more attention to the sustainability education side, especially the creation of the sustainability education hub. For example, as the new strategic plan indicates, the Working Group on Sustainable Education was established to ensure that "100% of our students are exposed to sustainability ideas, concepts, and skill-building" [8] (p. 2). The campuses are planned to serve as "living labs" for innovative practices in sustainability education and provide students with various experiential learning opportunities. One interviewee emphasized the role of the HKSCC as a living lab to explore new sustainability practices and models and identify the effective ones for promotion. "The role of living labs and educators gives HKSCC a unique role in the sustainability sector in Hong Kong" (SP01). This visionary plan also resonates with the frontier studies regarding sustainability in higher education [33].

### 4.2. Good Practices

Three good practices were highlighted by interviewees in this study. These practices are reflected by the collective power through group working of eight universities, the excellent performance of self-generated sub-committee, and good relationship with the government maintained by regular and effective reporting activities.

The HKSCC has successfully integrated eight UGC-funded universities into a higher education sector group in regards to sustainability efforts. This integration is demonstrated in two aspects. First, HKSCC standardized sustainability practices, including data collection and reporting. Before the establishment of the HKSCC, the eight universities had different emphases on sustainability within their campuses. Moreover, they collected different sustainability data and used distinct ways to

record the same data. The HKSCC standardized these practices, which led to the annual reports of HKSCC shared among eight universities, the Hong Kong government, and relevant stakeholders. The annual report first presents the aggregate sustainable development performance of eight universities in environmental aspects, including energy consumption, greenhouse gas emissions, water and paper consumption, waste production, renewable energy generations, and recycling. Then the major projects, events, and meetings are highlighted in the annual report e.g., reference [9]. Second, as consumption is an essential part of sustainability, the eight universities have acted as an integrated higher education sector to negotiate with suppliers and make the purchase of materials and equipment, such as paper and computers. As a sector, the HKSCC holds more bargaining power than individual universities. Therefore, “by getting together and agreeing on standards, [HKSCC can decide together that] all universities will only have this kind of paper and computers, and [suppliers] must have a clear plan to remove and recycle them properly at the end. What we have been quite successful [at] is working at that level” (SP01).

The second good practice highlighted by interviewees is the Joint University Campaign sub-committee. This sub-committee was originally self-generated by dedicated and passionate HKSCC members who want to promote sustainability on campuses. They have successfully planned and implemented the joint university disposables campaigns “Skip the Straw” and “Bring Your Own” across eight universities. During the “Skip the Straw” week of 12–16 March 2018, students and staff of eight universities only got straws upon request at their on-campus canteens, and in the end, more than 76,000 disposable straws were saved [12]. In 2019, the second joint university disposables campaign, “Bring Your Own” was held by HKSCC during the week 11–17 March. During this week, students and staff could receive special discounts or incentives from the on-campus canteens if they brought their own reusable food and water containers. In this campaign, social media outlets were used to promote this event. Because of the success of these two campaigns, HKSCC aims to continue the joint university campaigns in the future, while some members universities have committed to continue the events individually on their campuses [9]. Owing to the excellent performance of this sub-committee, the HKSCC recognizes its contribution and has turned it into the formal Working Group on Joint University Campaign in the new strategic plan. “[In the general HKSCC meeting, sub-committee] always proposes what data should be included in the next year’s annual report and what event should be organized in the next year. These proposals always get approved. So, I think the HKSCC committee recognizes the sub-committee because we are doing the jobs to our best abilities” (SP03).

The annual report is the primary way for HKSCC to report its sustainability efforts to relevant stakeholders, especially HUCOM, the governing body. Every year, HKSCC holds several sharing sessions with the Environment Bureau of Hong Kong governments and its departments to present the annual report and discuss urgent environmental issues to which the HKSCC can contribute. The HKSCC has realized the significance of annual reports in measuring member universities’ and sector-wide sustainability performance and highlighting HKSCC’s contributions. Therefore, in 2015, the HKSCC re-structured the contents of the annual report and published the online version on the official website [10]. The HKSCC takes advantage of the reporting practices to the government to increase its visibility and showcase what it has achieved. Interviewees also emphasized that the reporting practices have been an essential way of keeping in touch with the government. As HKSCC is a voluntary organization for the promotion of sustainability practices in Hong Kong universities, it has no actual administrative power or responsibilities. Thus, government support has been crucial for its further development. As one interviewee introduced, “we try to communicate with the government regularly and effectively, and the results are quite good. We were invited to send two members every year to the [Hong Kong] Chief Executive Officer’s policy address and the meeting about the environmental policy. We are included in the source of discussion and can see that the government values the inputs of the higher education sector in sustainability. We would keep this effective reporting scheme and [would] like to do more” (SP01).

#### 4.3. Challenges

Four challenges emerged during the analysis of data collected from the interviews and document review. These challenges include the need for re-affirmation of the value of sustainability in HEIs, management dilemma, the lack of involvement of academics, and the lack of external evaluation.

Given the scarcity of central power, the HKSCC can suggest what the best sustainability practices are, but the university management decides whether or not they will adopt these practices. Moreover, each university management decides to what extent they value sustainability. Therefore, as a consortium, the HKSCC must figure out how to construct an effective and collaborative organization of eight institutions with different goals and interests. In this sense, 2019 is crucial for the HKSCC because it is the beginning of the second eight-year cycle. In this year, the HKSCC must guarantee the current presidents of the eight universities to re-affirm the value of sustainability in the higher education sector, which will ensure the support from the governing body—HUCOM.

As the second challenge, the management dilemma is demonstrated by the discussion within HKSCC if a regular position should be set up to serve as the point of contact because people are only able to contact the convener or the secretariat, who are engrossed in their own institutional work. This situation will damage the external connections of HKSCC. One interviewee argued, “if I want to co-organize a sustainability event with HKSCC, I will be confused after checking the HKSCC website, where I can only find an email addressing to the current convener” (SP02). However, the need for this regular position is still in discussion and has not been approved because of the complicated situation regarding which university should house this position and provide compensation.

The next challenge emphasized by interviewees was the inadequacy of engagement of the academic side in the HKSCC. Currently, the HKSCC is focusing on the operation side of meeting the sustainability goals instead of the research and education side. The HKSCC has done an excellent job in standardizing sustainability data collection and reporting, and meeting the reduction goals of greenhouse gas emissions, energy consumptions, and waste production. However, the HKSCC requires further efforts in the realization of the core missions of the eight universities in sustainability research, teaching, and knowledge transfer. One interviewee argued that this challenge is derived from that the shortage of sufficient involvement of the academics and experts in the HKSCC. “It has been a challenge for HKSCC to identify and pull together the academic people among eight universities to work for sustainable development” (SP01).

Ultimately, regarding the evaluation of HKSCC’s efforts, the eight universities as a group serve the internal evaluation role to observe how they are performing. Even though several universities, such as the University of Hong Kong and the City University of Hong Kong, have joined the regional and international sustainability networks and applied the sustainability assessment tools to evaluate their efforts, the HKSCC has not applied the external evaluation tools and systems. To some degree, HUCOM is serving as the internal assessment body to evaluate the efforts of HKSCC, and the annual reports are the primary evaluation materials. However, as one interviewee said, “it does not matter if a university is doing well or not” (SP03). The lack of a rigorous external evaluation role may be detrimental to the future efforts conducted by HKSCC.

## 5. Discussion

### 5.1. Future Development of HKSCC

The HKSCC does well in integrating eight universities into a higher education sector to negotiate with business and another social sector to meet sustainability goals. Also, from the “bottom-up” perspective, because of the advisory role of HKSCC and the omission of central power, the self-generated and voluntary sub-committees or working groups have played a significant role in the sustainability practices across eight universities. However, the HKSCC merely focuses on the environmental side of sustainability practices, and the social impact side is less engaged in the process. The HKSCC presents a collective and meaningful way of sustainability efforts across the universities in the same region. Even though it faces challenges, its voluntary and bottom-up

mechanism has shown great merits, which can be insightful for the efforts of other universities, especially those that want to act within an integrated higher education sector.

For the future development of HKSCC, the newly released strategic plan provides an “ambitious but not overly ambitious master plan” (SP01). However, the key to realizing the visions of the new plan is to turn all tactical plans into practice. Another critical point to realize the plan is to make the goals of HKSCC accountable for each university. The HKSCC should consider introducing an external evaluation body to assess the performance of the HKSCC as a whole and that of individual universities.

Moreover, the HKSCC should keep efforts to expand its roles. The HKSCC has demonstrated a focus shift to the social impact as stated in its strategic plan: “in order to promote sustainability, we must first be a leader in sustainability by being accountable for our own performance. The targets should include environmental indicators and social indicators” [8] (p. 2). In addition to being an advisory organization, the HKSCC must serve as a “living lab” for sustainable education and practices to engage scholars and practitioners and inform students and younger generations through formal and informal education. The HKSCC has the advantage of the eight universities that can provide the platforms for sustainability education and collaborations among academics. The key is that eight universities should identify and encourage academic staff interested in sustainability issues to be involved. Informal education, such as extra-curricular events across the eight universities, can be an excellent platform for students and staff to learn from experiences. For the next step, HKSCC should consider how to expand its influence beyond the campus to the communities and Hong Kong society.

Among the challenges faced by HKSCC, the need for support from the university administrative level is prominent, which also resonates with the literature on the obstacles of sustainability practices in HEIs [6,25,26]. Responding to the call of the UN in promoting SDGs across different parts of the globe, we have witnessed that several HEIs around the world have engaged in sustainable development management practices and have made efforts to integrate sustainability practices into their institutional strategic plans, assessment tools, and reporting schemes. However, further research demands the promotion of sustainability accounting and practices in HEIs [23]. This case study of the HKSCC presents the significance of the close relationship between eight universities and the Hong Kong government in guaranteeing high-level support, which provides insights into solving the issue of lacking support.

## 5.2. Implications from HKSCC

Our analysis of Hong Kong suggested a different development experience that HKSCC has made serious attempts to integrate the eight public universities to negotiate with the business and the broader social sector to realize the sustainability goals. This practice supports the effectiveness of collective efforts of a group of universities in promoting sustainable development in the higher education sector as the HOCH-N Project in Germany [14]. Unlike experiences elsewhere, the approach that the public higher education sector in Hong Kong has adopted is very much a bottom-up one, which may account for the success story when Hong Kong universities are promoting sustainability in their campuses and beyond.

Ultimately, this study clearly reveals the unique governance model that Hong Kong universities utilize. Unlike their counterparts in other Asian countries or regions, Hong Kong universities enjoy a high degree of “institutional autonomy” and “academic freedom”, which underpin the success of the university sector in the city. Our discussion suggests that a “bottom-up” approach is useful when addressing sustainability issues confronting universities. Individual universities can freely decide what approaches and measures must be adopted to address issues related to sustainability [34]. Unlike university governance commonly adopted in other Asian university systems in which the Ministry of Education plays a directive role in shaping developments of universities through a “centralized–decentralized” model in governing universities, the present study highlights how Hong Kong universities enjoy institutional autonomy in managing their institutions, including matters in sustainability [1].

Given the unique university governance model with a high degree of institutional autonomy, this study, however, reveals the weaknesses of the Hong Kong case, especially the promotion of UN SDGs has inclined to focus on environmentally related matters than the broader conception of sustainable development [18]. If we frame the promotion of SDGs from a broad perspective, particularly when we review Hong Kong universities' efforts in promoting sustainable and responsible education, we should definitely go beyond the current approach and practices in sustainability promotion to transform HEIs to "living labs" for sustainability [33], including addressing broad issues related to financial sustainability, inequality in education arising from the three major transformation processes of the marketization, privatization, and internationalization of higher education [1,2]. These transformation processes have created more opportunities for improving access to higher education. Nonetheless, the same reform processes also intensify educational inequality, favoring the elites and disadvantaging those coming from less-favorable socio-economic groups [35–38]. Analyzing the above case study in light of the conceptual framework demonstrated at the beginning of this article, Hong Kong public universities must clearly strengthen their resilience and risk management in enhancing sustainability through effective university governance. In view of uncertain futures, especially when universities in Hong Kong have recently overcome student protests, risk management measures, and resilience checks are becoming even more important for promoting sustainability not only for sustainability accounting purposes but also for the broad SDGs advocated by the UN.

This research focuses on sustainability accounting when reflecting upon how universities in Hong Kong handle UN SDGs. We must realize that sustainability and resilience assessment should go beyond sustainability accounting. Contemporary universities are facing significant social, economic, political, and cultural changes. How universities can manage such rapid and uncertain changes would require more than rhetorical commitments. The theoretical framework set out in this article clearly reminds university leaders to pay particular systematic attention and priority placement in their institutional plans, organizations, and budgets. As Neubauer rightly observed: "HEIs need to develop some kind of systematic processes by which they can develop the operational aspects of sustainability that are consistent with the sustainability environment they have identified as relevant to their mission, structure and capabilities" [29] (p. 15). Nonetheless, we must note that setting up systems is relatively easy. However, what is more difficult is to make sure the systemic changes initiated by the university management would really transform individual academics/administrators to support the proposed changes embracing the ideas central to sustainability. Developing sustainability and resilience would require "some form of effective 'futuring' or 'environmental scanning' that allows [academics] to gain insights into a variety of changing environments and this capacity needs to be combined with an effective process that feeds these elements 'back into' the operational decision-making systems of the institution" [29] (p. 15). Hence, changing the ecosystem and ecologies of universities is the key toward successful higher education sustainability [39].

## 6. Conclusions

This study on the HKSCC has critically reviewed what the eight public universities in Hong Kong have accomplished in promoting sustainability. Although this analysis has indicated the strengths of the bottom-up approach that Hong Kong has adopted, the success story will not persist if the system is not made more transparent. In addition, promoting sustainability is not the senior management's responsibility. Instead, a caring culture requires engagement of the whole university community to significantly affect the implementation of sustainability plans in line with the UN SDGs. Also, the above analysis clearly shows the unique approach that universities in Hong Kong adopt when promoting sustainability related matters. Obviously, HEIs in Hong Kong enjoy institutional autonomy to decide upon policies and measures appropriate for addressing issues related to sustainability. Nonetheless, without sufficient coordination for cooperation across different institutions, the effectiveness and function of the HKSCC may be undermined, especially when synergy could be maximized when inter-institutional collaborations are needed. Therefore, when

referring to the HKSCC case in the context of different countries and regions, it is critical for higher education policymakers and institutional leaders to evaluate collaboration and coordination within the higher education sector. Most important of all, this study suggests going beyond promoting the narrowly defined notion of sustainability to address broad issues related to sustainable development, which involves proactively developing policies and measures coping with the negative consequences related to massification, privatization, and internationalization.

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