Handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak

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Abstract—This paper is an in-depth review of the Handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak. Aiming to investigate to what extent this handbook can contribute to the teaching and learning of countries suffering from the pandemic, this paper analyzes the goal and strategies of flexible learning, which are presented in the handbook. It is concluded that the handbook provided comprehensive knowledge and practical strategies for educators and parents to facilitate learning beyond the restrictions of space and time, and that the handbook demonstrated clear criteria for educators to choose educational tools and resources in order to implement flexible learning. Based on these findings, it is suggested that all stakeholders should consider flexible learning from six aspects: infrastructure, learning tools, learning resources, teaching and learning methods, services for teachers and students, and cooperation between schools, governments, and enterprises. To further strengthen the adaptability of flexible learning, future researches on this subject should pay more attention to the adaption of flexible learning in culturally and politically different context, the assessment and evaluation of learning experiences and outcomes of flexible learning, and teachers’ competency building in the era of flexible learning.

Index Terms—Book review, COVID-19, Flexible learning, technology

I. INTRODUCTION

Due to the covid-19 pandemic, thousands of schools worldwide have closed, where over one billion students could not go back to their schools [1]. Therefore, to maintain education from home, Open and Distance Learning (ODL) have been applied. ODL aims to provide open access to education, by removing learning constraints, such as time and place, and offering flexible learning opportunities to individuals and groups of learners. ODL is one of the most rapidly growing fields of education, and its potential impact on all education delivery systems has been greatly accentuated through the development of Internet-based information technologies, and in particular the World Wide Web [2]. In the same context, several researchers have reported many challenges in terms of adopting ODL by both students and teachers during this pandemic, including lack of ICT skills and online isolation [3, 4].

To address the ongoing covid-19 outbreak and the provided educational responses in crises and emergencies, the Smart Learning Institute of Beijing Normal University (SLIBNU) in collaboration with UNESCO International Research and Training Centre for Rural Education (INRULED) and UNESCO Institute for Information Technologies in Education (IITE) have published the Handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak [5]. Therefore, this study aims to review this handbook to provide insights on how to maintain education in crises and emergencies. These insights could help in preparing readers for future crises.

II. BOOK REVIEW


As the most important notion of this handbook, flexible learning is well explained and elaborated in Chapter 1. Drawing on the theoretical frameworks from Lewis [6], Gordon [7], Ryan and Tilbury [8], and other scholars, this handbook re-conceptualizes flexible learning and pedagogy as a learner-centered educational strategy that can be featured at both individual and institution level.

Chapter 2 serves as a transition from concept to practice and contextualizes flexible learning in an online learning environment. The handbook considers online learning as a vehicle to support flexible learning, as it brings along diverse learning tools and facilitates active learning experiences. This chapter specifically introduces the most used online learning platforms and the core elements of supporting “Disrupted Classes, Undisrupted Learning”, an initiative carried out by the Chinese Ministry of Education. With vivid stories and thorough descriptions of the current state of flexible learning in China, this chapter delineates flexible learning as both an innovative concept and an applicable approach.

Chapter 3 demonstrates the importance of the reliable network infrastructure in flexible learning. The chapter lists different scenarios where network infrastructure plays a vital role, including attending video meetings, accessing digital resources, etc. Drawing on the case of a mobile communication operator, this chapter also indicates that government and private sectors should work closely and collaboratively to maintain the continuity of education during the pandemic.

Chapter 4 continues to introduce another important key related to flexible learning. The precise criteria of selecting learning tools is of immense importance for curriculum creators and teachers when it
comes to flexible learning design. It highlights the mixed usage of various tools in aiding communication among teachers and students, managing virtual classes, as well as facilitating students’ cognitive development and collaborative construction of knowledge.

Chapter 5 helps readers walk through the suitable digital learning resources required to implement flexible learning. It notifies readers to evaluate digital learning resources before using them, pointing out that suitable learning resources should meet criteria like licensing, accuracy of content, cultural relevance and so on. Therefore, Chapter 5 prepares teachers and parents to facilitate flexible learning with necessary knowledge in choosing and providing learning resources for children.

Following these chapters, the handbook steers the focus toward the teaching and learning in Chapter 6. This chapter centers the autonomy of students, hence the handbook reiterates the learner-centered characteristics of flexible learning, by providing multiple learning strategies including case study, debate, discussion, student-led discovery, and so on.

Chapter 7 summarizes the support services for teachers and students. What differentiates this chapter from the former ones is that Chapter 7 demonstrates the goals of utilizing the support services for both teachers and students, and introduces the services by presenting substantial real-life examples, where teachers successfully conducted learning activities, designed feedback and assessment systems, and students actively engaged in learning while producing impressive learning outcomes.

The last chapter focuses on the collaborative support from governments, enterprises and schools to ensure the high-quality content, diverse process and effective outcomes of flexible learning. Holding governments, enterprises and schools accountable in this uncertain time is a vital message this handbook hopes to convey. Story by story, Chapter 8 shows that the collaboration between governments and schools, governments and enterprises has contributed greatly to students’ effective learning.

III. READING REFLECTION

While reading this handbook, readers will admire that this handbook not only reports theoretical knowledge, but also practical case studies and vivid stories shared by teachers from different Chinese Universities during the covid-19. These studies and stories can be adopted by other teachers in their contexts to facilitate ODL in times of crises. Additionally, after reading this handbook, the following conclusions can be identified to support education in times of crises.

(1) Flexible learning is one of the common approaches in ODL that can be applied in crises via key elements, namely: (a) reliable communication infrastructure, (b) suitable digital learning resources, (c) friendly learning tools, (d) effective learning methods, and (e) instructional organizations, (f) effective support services for both teachers and learners, and (g) close cooperation among schools, governments, and enterprises.

(2) Teachers and students should pay attention to the quality of learning materials published online, as thousands of resources are published online without knowing the reliability of the publishers/authors. Therefore, they can use several criteria to select the suitable ones, including: (a) licensing: is the resource open-licensed and can be reused by others; (b) ease of adaptability: can the resource easily be adapted (mixed or modified) to different contexts (e.g., PowerPoint presentations can be good resources as they can be easily modified); (c) cultural relevance & sensitivity: educators should choose educational resources that do not report any offensive information to any given race or culture.

(3) Different online instructions, such as collaborative learning, social networks and hands-on learning activities, can significantly enable students to learn, communicate and interact beyond the limitations of space and time, and enormously promote students’ autonomy in learning and constructing knowledge [9].

(4) The learning assessment of students can also be realized during flexible learning in a more effective and flexible way. Project based assessments, such as assessing the written reports or the prepared presentation by students, can be used instead of paper-based assessments to assess the learning performance of students in ODL. Moreover, flexible learning enables teachers to capture the learning traces through real-time computer-based tools, which advances the accuracy of assessments.

(5) To ensure inclusive education as too many students might not have Internet especially in rural and remote areas, flexible learning should not rely only on online mediums but also on offline mediums to deliver courses, such as tele-courses (courses via TV). The courses can be presented both synchronously and asynchronously in accordance with students’ study schedule and pace.

In summary, amid this unprecedented health crisis, a handbook regarding the subject of flexible learning in response to the crisis is much needed in the current literature, given that abundant literature has conveyed the idea that learning should not be disrupted during such emergencies.

To summarize, there are three main highlights that are noteworthy of this handbook. First, it described and classified different learning tools in flexible learning, which caters to different learning scenarios. The handbook presented several popular learning repositories that teachers can visit to find different learning and teaching materials. The criteria to select learning tools and resources provided in the handbook are also useful for practices, in that it is simple and detailed. Second, the handbook introduced a framework [5] that hold society, school, and government accountable regarding flexible learning especially amid emergencies and crisis. For each subject, using simple diagrams, this handbook helped readers identify different priorities. Third, vivid stories presented in this handbook significantly improve readers’ understanding on flexible learning, which can better instruct them to implement and facilitate learning and teaching.

While finishing reading the handbook, some questions can be raised, and need to be answered in order to better serve readers in a global context. As readers may find out in the handbook, the concentrated support from the national government greatly promoted the successful implementation of flexible learning in China. This is due to the characteristics of China’s education system. It’s state-run and little private providers are involved in school sector [10]. The state heavily steers and implements education in such an immense education system through financial subsidies and using laws and regulations. However, to what extent can such strategies be applied to a context where the government cannot leverage resources this easily and quickly? UNESCO’s call to support learning and knowledge sharing through Open Educational Resources (OER) [11] has drawn public’s attention to OER, as it plays a vital role in eliminating the gaps of unequal distributions of educational resources [12]. Hence providing countries that are unlike China with instructions on how to access to and utilize abundant learning resources is important in the sense of expanding flexible learning beyond national borders. Thinking “flexible” from this perspective may enrich the discussion and allow flexible learning to be more applicable.

Additionally, cultural differences should be considered when providing flexible learning to learners. Hofstede [13] pointed out that culture is a crucial factor impacting students’ learning behaviors. The Chinese students’ learning experience and performance may differ.
from those of students from other cultures, due to their perception of individualism, power distance, and uncertainty avoidance, which are hugely impacted by the culture they live in. Therefore, in order to implement flexible learning in broader and diverse contexts, besides assuring the content is culturally relevant, how to make the teaching and learning of flexible learning culturally flexible is another path for educators to probe into.

Besides, this handbook did not discuss the impact of the provided flexible learning experiences on the students’ learning outcomes. Therefore, more investigation should be conducted to understand how students perceived these learning experiences. Researches [14] have indicated that an online environment may have a negative impact on students’ learning outcomes, including lowering students’ performance and retention of knowledge. How to generate a reliable assessment and evaluation to address these problems emerging in a flexible learning environment remains a major concern for flexible learning.

In terms of emerging technologies, the handbook barely touched on technologies other than Artificial Intelligence, overlooking some other powerful technologies that can be utilized to provide better learning experiences. For instance, Augmented Reality (AR) and Virtual Reality (VR) are frequently discussed to enhance immersive learning [15], which can also adapt to more complicated learning contexts [16].

Last but not least, the handbook does not mention teacher education and preparation in terms of flexible learning. According to a research conducted in China, scholars found that teachers’ utilization of network resources is very low and the advantage of OER is not fully played [17]. Scholars [18] indicated that empowering and building teachers’ competencies in online teaching is vital to promoting teaching quality. Therefore, more information should be provided to enhance teachers’ ability to integrate technology into pedagogical practices in flexible learning.

REFERENCES


