Chapter 13
Managing the Knowledge for an E–Tourism Curriculum: A Knowledge Supply Chain Approach

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ABSTRACT
The evolution from an information-based economy to a knowledge-based society requires higher education to produce intellectual outputs which match market and society needs by improving its educational process and outputs. Curriculum, as a core factor in refining this process, is therefore a key part of the transformation. Management solutions such as knowledge management (KM) or supply-chain management (SCM) have been applied to enhance the efficiency and effectiveness of higher education but were mostly applied at an administrative level. To improve the quality of education to meet industry and society needs requires a holistic management of the curriculum design and development process. This empirical research in Thailand proposes a knowledge supply chain (KSC) approach as a potential solution, which integrates theories and practices of KM and SCM to design an e-tourism curriculum to meet the industry and society needs in the context of the Greater Mekong sub-region (GMS).

INTRODUCTION
Tourism contributed the main source of foreign exchange earnings, employment and national revenue for many developing countries, particularly in Southeast Asia. Although influenced by the recent global economic crisis, tourism ranks third after chemicals and fuels as a global export category, contributing US$1.220 billion revenue in 2016 (UNWTO, 2017). The diffusion and development of Information, Communications, and Technologies (ICTs) unavoidably changed the needs and behaviors of tourism consumers, now defined as ‘post-modern tourists’ (Nuryaniti, 1996) or ‘new tourists’ (Buhalis, 2003) and the way that organizations compete (Porter, 1985). ICTs empowered new tourists to become more information-rich and enabled the tourism industry to interactively communicate with their consumers.

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The technology-enabled tourism industry, or e-tourism (Buhalis, 2003), has brought in both opportunities and challenges to countries, whose GDP is reliant on tourism. Those countries and organisations, which possess technical infrastructure and intellectual labour, take the biggest share of tourism revenue. Tourism revenue leakage, for example, has occurred in the Greater Mekong Sub-region (GMS), where tourism income has been funnelled away from local economies, where domestic travel agents, in comparison to international agents, are often less competitive and unable to meet the needs of tourists. International firms are often more proactive in exploiting the opportunities presented by the evolution of technology-empowered tourism and maintain well-prepared labour resources. Up to date e-tourism knowledge and techniques, when utilised by those working in the tourism industry, enhances competitiveness and satisfies customers. To maintain or expand a successful e-tourism business in a global market requires tourism professionals to be well-equipped with the complete domain knowledge of tourism, business and know-how skills of ICTs to understand, predict and effectively respond to the changing needs of new tourists. This calls for an effective e-tourism education which can be provided through higher education institutions.

Higher education institutions (HEIs) are important knowledge and service providers and are obliged to produce qualified intellectual products to meet and support industry needs. This is achieved via their graduating students, whose competencies and performances are ultimately a reflection of the university curriculum. However, although tourism dominates the national revenue of GMS developing countries, and is currently being restructured towards e-tourism, the corresponding e-tourism education in GMS countries is still nascent. The identification of e-tourism domain knowledge remained obscure and the supply of that knowledge is inefficient, which result in an acute shortage of lecturers, graduates, and professionals in this area. The lack of insightful understanding of industry and society needs, along with the insufficiency of knowledge supply and support have made e-tourism education in these geographic areas much slower to respond to the development of the e-tourism industry. This research suggests there is a need to reinvigorate e-tourism curriculum in GMS countries in order to respond to the changing needs of the tourism industry, and enhance its competitiveness in the global market.

Research in this paper reveals a new method to design the e-tourism curriculum. Drawing on tools from the disciplines of Knowledge Management (KM) and Supply Chain Management (SCM), Chiang Mai University, Thailand was selected to implement and test this new method in designing an e-tourism curriculum. The aim of this paper is to present a new way of capturing and supporting knowledge, visualising, developing and designing an e-tourism curriculum. The research specifically suggests a Knowledge Supply Chain (KSC) as a core approach to leverage KM and SCM theories and tools to improve the effectiveness of e-tourism curriculum design by identifying knowledge demand and enhancing knowledge supply. Before introducing the proposed methods and tools, there is a need to understand the essential elements of e-tourism, the development of the curriculum, and the methodology used to reengineer e-tourism curriculum design.

LITERATURE REVIEW

The Tourism Curriculum

Taylor and Richards (1985) suggested a simple definition of the curriculum, as *that which is taught*. This means what a curriculum contains is the choice of knowledge. A tourism curriculum also gives
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