A Hybrid Use of Soft Systems Methodology for Developing a Framework of Evidence-Based Teaching for Hospitality and Tourism Instructors in Vietnam

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Accepted: 8 August 2022 / Published online: 20 August 2022
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Abstract
This paper adopts the hybrid use of soft systems methodology (SSM) as a process of inquiry into understanding the lack of a framework for evidence-based teaching (EBT) in hospitality and tourism education in Vietnam. By combining SSM techniques with interview data, we also develop an EBT framework for the hospitality and tourism profession. The proposed framework addresses three essential sources of evidence for teaching: (1) research-based professional and pedagogical methods, (2) industry-based materials to ensure education-industry linkage, and (3) instructors’ knowledge, experience and assumptions about their teaching roles in the classroom. This conceptual framework can be used as a guideline for conducting relevant curriculum renewal and pedagogical reforms in hospitality and tourism institutions in Vietnam.

Keywords Evidence-based teaching (EBT) · Soft systems methodology (SSM) · SSM applications · Inquiry process · Stakeholders · Hospitality and tourism education

Introduction
The COVID-19 pandemic has caused a major decline in the number of students enrolled in hospitality and tourism academic programs in Vietnam (Anh 2021; Thanh 2021). Yet, even before the outbreak of this contagious disease, there have been significant quality issues in hospitality and tourism institutions in this developing country, which also played a role in making students hesitate to choose this profession. As a result, there is a pressing need to help hospitality and tourism education system maintain students’ hope and confidence in their academic program and future career, as well as their commitment to them. One way to address this need is through effective pedagogical strategies that are drawn from the best educational evidence (Mitchell and Sutherland 2020; Seo and Kim 2021; Zhong et al. 2021; Rajaram 2021). However, the concept of evidence-based teaching (EBT) has not been adequately examined in the existing literature of education in general (Georgiou...
et al. 2020; Hammersley 2007; Hargreaves 1999) and in hospitality and tourism education in particular (Deale and Newton 2014). In addition, the current discussion on the EBT concept only focuses on the research-based dimension of educational evidence and how to integrate such dimension with teacher’s experience and wisdom. For the professional education system of the rapidly changing hospitality and tourism sector, the current framework for defining EBT lacks an important aspect, which is about forging the partnership between the industry and education providers to ensure that educational processes offer genuine benefits to all stakeholders. Such industry-education linkage has been strongly advocated by numerous researchers because it is beneficial to not only the delivery of hospitality programs but also to the professional development of managers working in hospitality organizations (Barrows and Walsh 2002b; Goodman and Sprague 1991; Le et al. 2018a; Lewis 1993). In Vietnam, research findings have highlighted a substantial mismatch between students’ expectations on entering the hospitality and tourism sector and the realities of working in this industry (Le et al. 2018b). This lack of a partnership between the industry and education providers has led to numerous quality issues in hospitality and tourism education in the Vietnamese context.

The goal of this paper is to provide an understanding of why there is a lack of a framework for defining the sound evidence necessary for teaching in hospitality and tourism institutions in Vietnam. Also, within this context, this paper highlights the roles of different stakeholders and the importance of the industry-education linkage, which is currently absent in the existing literature about the EBT concept. Accordingly, we propose an EBT framework that guides hospitality and tourism instructors in Vietnam in constructing more comprehensive teaching content and effective classroom practices. These guidelines are expected to lay a theoretical foundation for conducting relevant curriculum renewal and sweeping pedagogical reforms necessary for the present situation of hospitality and tourism institutions in Vietnam.

The approach that we adopt to achieve our research goals is the hybrid use of soft system methodology (SSM) (Hanafizadeh and Mehrabioun 2018). Accordingly, this paper chooses to combine SSM with interpretative phenomenological analysis (IPA). The reason for this choice is that SSM has been an appropriate approach for structuring the thinking process and tackling the complexity of social situations in which different stakeholders with conflicting views and interests exist (Checkland and Poulter 2020), while IPA is a qualitative approach that focuses on the unique contributions of experts whose thoughts and feelings can offer researchers meaningful insights of the phenomenon being explored (Reid et al. 2005). When combined, these two research approaches can enhance the interpretative nature of SSM models and accordingly develop a more detailed understanding of the problematical situation. In this paper, SSM techniques such as CATWOE analysis, root definitions and conceptual models are conducted as a process of inquiry into understanding the current problem of evidence-based teaching in hospitality and tourism institutions in Vietnam. In addition, the adoption of qualitative analysis in the second stage of the SSM process enables us to gain insights into stakeholders’ perspectives on the concept of educational evidence in the hospitality and tourism profession. On the basis of the SSM approach and IPA results, we propose an EBT framework which addresses three essential sources of evidence for instructors in the hospitality and tourism sector: (1) research-based technical and pedagogical methods, (2) industry-based materials to ensure education-industry linkage, and (3) instructors’ knowledge, experience and assumptions about their teaching roles in the classroom. Specific examples of the three sources will be provided in this paper as guidelines for conducting relevant curriculum renewal and pedagogical reforms in hospitality and tourism institutions in Vietnam.
Theoretical Underpinnings

The Concept of EBT

The Research- and Outcome-based Dimension of EBT

Although many researchers and educators strongly advocate basing policy-making and educational practices on sound evidence, the concept of evidence-based education has remained contentious over the past few decades (Georgiou et al. 2020; Hammersley 2007; Hargreaves 1999). The term was first used in a noteworthy lecture delivered by Hargreaves (1996) in the United Kingdom during a time when the education system in the UK was going through a fundamental transformation which left many teachers confused and stressed (Wiltshier 2007). Hargreaves (1996) emphasized that “both education and medicine are profoundly people-centered professions” (p. 1), and hence education should consider the role of scientific knowledge in professional practice to be as crucial as in the medical field. Accordingly, the evidence necessary for policy making or educational practice should be produced from experimental studies or research with randomized controlled trials (Hargreaves 1999). In other words, research needs to provide quality evidence that leads to “actionable knowledge” (p. 412) for both policy makers and practitioners (Hargreaves 1997).

In a similar way, Mitchell and Sutherland (2020) referred to evidence-based teaching strategies as “clearly specified teaching methods that have been shown in controlled research to be effective in bringing about desired outcomes in a delineated population of learners” (p. 3). Notably, the “desired outcomes” mentioned in this definition have been repeatedly highlighted in the literature on outcomes-based education (OBE), a concept derived from Bloom’s Taxonomy of Educational Objectives in the work of Engelhart et al. (1956) and Bloom’s research on mastery learning (Bloom 1971). Within this OBE framework, EBT can be understood as a means to stimulate and control the production of measurable and predictable learning outcomes that are expected to be the same for all students (Elliott 2001).

Critique of the Research- and Outcome-Based Approach

Although the principles of outcomes- and research-based teaching have been widely embraced and advocated, this philosophy of education also provokes criticism. In the early evolution of OBE, Stenhouse (1975) noted that although learning objectives concerning factual knowledge and basic skills are essential, the development of learners’ values, judgment and wisdom cannot be incorporated into a curriculum that focuses merely on producing standardized exit behaviours. Even in later periods, when a transitional OBE framework for developing critical thinking, problem-solving and communication skills had been introduced, there had been little empirical evidence for the success of its implementation (Donnelly 2007). In addition, the framework should not be used for evaluating teaching performance, especially by assessing whether all students have the same results in their values and judgment. According to Elliott (2001), teachers do not necessarily “have the same outcomes in mind for all students” (p. 558), and policy-makers should respect teachers’ autonomy and trust their abilities to utilize their experience or exercise their wisdom in classroom practice.
The researchers who criticize the OBE approach for its control ideology also denounce the research-based teaching framework of Hargreaves (1996) for its naive positivist approach. A trenchant critique was made by Hammersley (1997), who argues that although the analogy that Hargreaves draws between education and medicine can be enlightening, medical scholars and practitioners do not face many of the problems that confront educational researchers, particularly those come from “the peculiarities of the social world” (p. 149). Similarly, Davies (1999) noted that, unlike in healthcare research, “there is no such thing as context-free evidence” (p. 111) in educational research because education has always been accompanied by complex cultural and contextual conditions. Additionally, sound evidence may not always be available to educators and teachers, whereas low-quality evidence resulting from poor or biased research design and implementation is inevitable and misleading (Hammersley 1997; Mitchell and Sutherland 2020). Therefore, rather than being based merely on research, evidence in education should also be derived from philosophical and ethical issues (Davies 1999; Peters 1973) as well as teachers’ roles, experience and wisdom (Stenhouse 1975).

The EBT Concept Within the Aims of Education

In his work, entitled “The Philosophy of Education”, Peters (1973) provided a definition for the aims of education from which implications for evidence-based teaching can be drawn. According to this author, extrinsic ends, e.g. students’ employability after graduation, should be referred to as training rather than education. The aims of education should be the intrinsic goods defined by the norms and values according to which the concept of an “educated man” (p. 18) is formed. These norms and values can be clustered into two groups: those that characterize an educated person and those that imply procedural principles. While the first group aims to describe a successfully “educated person” (p. 18), the second group of educational aims points to the importance of procedural values. Here, Peters (1973) referred to procedural aims as “growth” and “the self-realization of the individual” (p. 24). Elliott (2001) agreed and added that such aims could be achieved through processes such as “learning by discovery”, “inquiry learning”, “autonomous learning” and “learning by experience” (p. 563). These classroom activities also stress the psychological theories and moral principles that underpin the ethical limits that education should place on the pedagogical strategies employed to construct students’ learning. In other words, these procedural aims should be consistent with “educationally worthwhile activities” (p. 25), such as respect for reasons and evidence (Peters 1973). Interestingly, such procedures are not contrary to Hargreaves’s (1996) emphasis on the OBE framework. Instead, they are inseparable parts of a means-ends education model and simultaneously play an essential role in directing teachers’ attention to educational priorities.

What is indeed distinct from Hargreaves’s approach is that Peters’s works strongly promote teachers’ role and engagement in judging or prioritizing educational aims, rather than just applying research findings and complying with educational policies based merely on the OBE framework. That is to say, not only do academic researchers lay the foundation for teachers to define what counts as educational evidence, but teachers also need to engage in constructing and utilizing research in their daily work (Davies 1999; Elliott 2001; Peters 1973).
Teachers’ Role in the EBT Concept

According to Stenhouse (1975), education should be understood in a comprehensive approach where there is a distinction between at least four different processes: training, instruction, initiation, and induction. These concepts are illustrated in Fig. 1.

As shown in Fig. 1, the objectives model implied in the OBE framework should only be applied in training and instruction activities where the acquisition of skills and information are the learning outcomes. Induction and initiation processes, which provide the context for all other educational activities, need to adopt a process model, rather than the objectives model. The author explains that these two primary processes induct students into the thought system and create the abilities to understand and make judgments. Such capabilities should not be treated as merely skills or exit behaviors that are the same for all students, like training and instruction. From this perspective, in order not to distort different bodies of knowledge, teachers should adopt a process model in curriculum design and pedagogical practices. Here, the implication is also related to teachers’ underlying assumptions about their classroom role, particularly in inducting students.

Although teachers often situate themselves as experts in a subject matter, a preferable role is for teachers to be learners alongside their students (Stenhouse 1975). When teachers present themselves as experts, they tend to employ the objectives model and adopt an authoritative teaching style, which could lead to a misinterpretation or distortion of...
knowledge, especially when inducting students into the thought system of a particular culture. Figure 2 demonstrates two possible assumptions that teachers can have about their role and the respective consequences.

As shown in Fig. 2, when teachers consider themselves as learners alongside their students, they would treat the deep knowledge in a subject matter as an object of inquiry. This assumption implies that knowledge is to be distinguished from information (Stenhouse 1983). Accordingly, evidence-based teaching should not be merely a means of acquiring a skill or piece of information, but a pedagogical aim that promotes depth of understanding. Sound educational evidence should induce students to immerse themselves in the deep structures of knowledge.

What clearly distinguishes Hargreaves to Stenhouse’s approach to EBT is that whereas the former author refers to research as “a basis for practice”, the latter appears to promote teachers’ assumed role and their pedagogical practices as a basis for research. Indeed, there should be an interaction between these distinct perspectives (see Fig. 3) to form a more comprehensive concept of educational evidence.

As shown in Fig. 3, when there is a distinction of four different processes: training, instruction, initiation, and induction, educational evidence should not be generated only
from randomized-controlled-trial studies and the outcomes-based framework; they should also be drawn upon how teachers impart their wisdom and structure students’ learning based on procedural principles. Accordingly, the interaction between the research-based dimension and teachers’ role and engagement in the classroom implies the importance of both researchers and teachers when defining what counts as evidence in education. Failing to create such interaction leads to what Hammersley (1997) refers to as the “yawning gap between theory and practice” in teaching (p. 147).

It should be noted that such a “yawning gap” occurs even more predominantly in the field of professional education. In hospitality and tourism education, for example, the gap between theory and practice remains both pedagogically and professionally (Zopiatis and Constanti 2007). In other words, the mismatch between teaching content and industry requirements indicates another necessary dimension of EBT in professional education. This dimension is often referred to as the education-industry linkage to which a large body of research has lent support, yet is still currently absent in the definition for the EBT concept.

The Industry-Education Linkage in the EBT Concept of Hospitality and Tourism Education

The existing literature has asserted that a competitive professional education system should be able to respond to the needs and expectations of various stakeholders, e.g. students, employers and educators (Barrows and Walsh 2002b; Goodman and Sprague 1991; Le et al. 2018a; Lewis 1993). In other words, there is a need to enhance the partnership between the industry and institutions to ensure that educational processes offer genuine benefits to all stakeholders. In hospitality and tourism education, Barrows and Walsh (2002b) suggested that short- and long-term forms of collaboration between industry associations and hospitality institutions should be established because such interactions are beneficial to the delivery of hospitality programs and the professional development of managers working in hospitality organizations. More recently, in South East Asian countries, hospitality and tourism researchers and educators also pay more attention to methods needed for enhancing the industry-education linkage as there have been numerous issues in human resources and service quality caused by the poor communication and collaboration between employers and education providers. For example, Le et al. (2018a) emphasized that Vietnamese students’ negative perceptions towards their career path in the hospitality and tourism industry result from the lack of practical experiences in hospitality organizations’ operational and managerial activities. These authors recommend that both employers and educational institutions strengthen their collaboration and communication by providing quality internship programs where students can have genuine opportunities to develop their professional skills and institutions can improve their curriculum provision or gain more credibility through the interns’ performance. Poor communication and collaboration between employers and education providers have led to numerous human-resources and service-quality issues in Vietnam, according to these authors.

Long before the COVID-19 pandemic spread across the globe, researchers had already warned that hospitality and tourism education would be among the disciplines that would disappear in the following decades, mainly because of institutions’ insufficient understanding of the way companies were really run. To illustrate this point, Goodman and Sprague (1991) insisted that “hospitality educators must revamp their curricula to meet more closely the updated needs of the industry – or risk losing their students to general business programs” (p. 66). Lewis (1993) agreed and noted that hospitality institutions should focus
more on quality teaching and real-world research that help to “lead the industry rather than follow it” (p. 273). More recently, Oskam (2018) and Gupta et al. (2021) stressed that the main challenge for hospitality institutions is to balance between ensuring academic quality standards and keeping up with the rapid development and new trends in the industry, particularly in the post-COVID-19 era.

The future of hospitality and tourism education depends on whether students’ hopefulness and career loyalty can be maintained when the industry starts recovering. Teaching still plays a significant role in maintaining such hopefulness and loyalty (Zhong et al. 2021). Therefore, what and how to teach still need to be among the primary concerns of hospitality and tourism stakeholders. The EBT concept, in the context of hospitality and tourism education, requires an industry-education linkage such that evidence is gathered from how companies in the industry are actually run.

SSM Applications in Education

Definition of SSM

Dealing with research topics about complex social and human issues requires a multiplicity-of-perspective methodology that pays attention to conflicting worldviews. For this reason, soft systems methodology (SSM) was developed to understand a particular complex social problematical situation and seek ways to improve it. This approach was developed by Checkland (1981) and has been applied in numerous fields, such as education, project management, human resources management, sustainable development and knowledge management. Notably, SSM is not only a technique or a tool for addressing social problems; it is indeed “an epistemology which can be used to try to understand and intervene usefully in the rich and surprising flux of everyday situations” (Checkland and Scholes 1990).

Soft systems thinking has been considered a response to the inability of traditional hard systems thinking in handling complex human and social aspects of problematical situations (Jackson 2001). According to Checkland and Poulter (2020), SSM is different from other systems approaches developed in the 1950 and 1960 s, e.g., systems engineering (SE). While SE represents the “hard” systems thinking school espousing the belief that the world consists of various interacting systems that can be “engineered” to achieve their objectives, SSM researchers regard the world not as a set of systems but as complex problematical, mysterious social interactions. Coping with such messy situations requires a process of investigation. “The notion of systemicity (‘systemlessness’)” appears in this process of inquiry into the world, not in the world itself (Checkland and Poulter 2020). Undergoing numerous developmental stages, SSM has now been claimed to be a mature process (Checkland and Poulter 2020; Mingers 2000) and recently defined as follows:

“SSM is an action-oriented process of inquiry into problematical situations in the everyday world; users learn their way from finding out about the situation to defining/taking action to improve it. The learning emerges via an organized process in which the real situation is explored, using as intellectual devices – which serve to provide structure to discussion – models of purposeful activity built to encapsulate pure, stated worldviews.” (Checkland and Poulter 2020).
Seven Stages in SSM

Checkland (1981) presented SSM as a flow of seven stages in a circular learning model, where stages 1, 2, 5, 6 and 7 are “real-world” activities requiring the involvement of people in the problematical situation, and stages 3 and 4 are “systems thinking” activities which may or may not involve these people in the situation. These seven stages are illustrated in Fig. 4 and are explained as follows:

1. **Understanding the problematical situation:** At this first stage, the situation in which a problem is perceived to exist is identified and described.

2. **Problematical situation expressed:** This step requires the expression of the problematical situation to be not in systems terms but in the form of a holistic view of conflicts and interests among different stakeholders. In this stage, stakeholders are encouraged to reveal their perspectives towards the problematical situation.

3. **Root definitions of relevant systems:** Constructing root definitions is another technique that can be used to describe the foundation of a system used to improve the situation of the problem. According to Elliott (2004), root definitions are different worldviews that reflect the perspectives of various people involved in the current situation. Each root definition can be developed on the basis of six characteristics of the CATWOE analysis, whose elements are explained by Bergvall-Kåreborn et al. (2004) as follows:

   - **Customer:** the person affected by the system, reflecting both victims or beneficiaries;
   - **Actor:** the agent of process transformation and change;
   - **Transformation:** the change that is taking place, formulated as a transformation of some input to some output: Input \( \rightarrow T \rightarrow \text{Output}; \)
   - **Weltanschauung:** the established worldview of assumptions that makes \( T \) meaningful;

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**Fig. 4** Seven stages in the Soft Systems Methodology (SSM) (Checkland 1981)
Owner: the sponsor of the system, or “decision-maker”, or “those with authority and responsibility over the system defined” (p. 66);
Environmental constraints: constraints from within or outside the system.

Bergvall-Kareborn et al. (2004) also noted that the CATWOE elements do not “represent the reality, but is a way of learning about social reality” (p. 57). Therefore, they play an essential role in forming a condensed root definition of the system and a useful conceptual model based on this root definition.

(4) Design of conceptual models: Any root definition may be described as a description of a purposeful human activity conceived as a transformation process. At Stage 4, a model of the activity system needed to achieve the transformation is made. This model is built to accomplish what is defined in the root definition. Therefore, while the definition is an account of what the system is, the conceptual model is an account of the activities which the system must perform in order to be the system named in the definition. Therefore, the elements of the conceptual model need to be formed using verbs.

(5) Comparison of models and reality: In this step, the conceptual models need to be compared with what is perceived to exist in the problematical situation expressed in Stage 2. The purpose of this stage is to generate debate about possible changes which might be made to improve the perceived problematical situation.

(6) Definition of feasible desirable changes: At this point, assessing the system’s feasibility is an essential task in the process. There are several ways of implementing this stage: running through the model again using different perspectives; undertaking additional systems-based analyses such as “Owner analysis” to investigate who fundamentally has the authority to take action, “Social system analysis” to understand how the various roles, norms, and values present in the real world relate to the conceptual model, and “Political analysis” to determine how power expressed in the situation is being studied.

(7) Actions to improve the problematical situation: At this stage, “feasible and desirable” changes (p. 180) are implemented (Checkland 1981). Although these changes may improve the initially perceived problematical situation, they may also create new problems during or after implementation. In other words, completing this last stage only indicates that a purposeful activity based on the power of a formal systems thinking approach has been carried out to improve a perceived problematical situation. The learning process must be continued, as SSM is not a “once-and-for-all approach to something sharply defined as a problem” (Checkland 1981).

SSM Application Levels

SSM is not only applied in scientific research; practitioners also perform it to solve conflicts in social situations where various stakeholders defend multiple perspectives and interests. According to HanafiZadeh and Mehrabioun (2018), there are three different levels of SSM applications. These are as follows:

(1) SSM as an inquiry process: at this application level, SSM is used mainly for understanding the social problematical situation. Changes to tackle the complex situation have not taken place in a practical manner.

(2) SSM as an action-oriented methodology: SSM applications at this level aim to produce changes to improve the social situation, rather than just creating an understanding of the problem as in the first level.
Hybrid use of SSM: researchers who use SSM at this level also combine it with tools and techniques from other methodologies, e.g. interviews, nominal groups, surveys or interpretive structural modelling. This hybrid use enhances the primary methodology, which could be either SSM or other selected methods, to attain research goals.

Problems in SSM Applications

SSM has undergone a developmental period of nearly 40 years, during which it has transformed through trenchant criticism, and the process itself has been radically rethought. Undoubtedly, it has become a “mature process” (Checkland and Poulter 2020), making its application areas continually expanded. Thus, most of its major limitations have already been addressed in its vast literature. In their most recent work about SSM, Checkland and Poulter (2020) asserted that changes to improve SSM are now increasingly rare. What is currently vital for SSM researchers, practitioners, and users is to focus on framing the proper mindset and constructing the right skills to approach it. Accordingly, this paper only reiterates what SSM researchers and practitioners need to pay attention to when attempting to adopt this approach in solving social problematical situations.

In the past, when applied in social sciences, SSM was often claimed to be fraught with significant theoretical and philosophical problems, particularly in its linkage with the hard approaches. Despite being a prominent method in reflective action research, SSM had its theoretical limitations, which are often related to a lack of structural social theories “to go beyond the world of individual meanings” (Mingers 2000). In other words, the worldviews and understanding obtained from the SSM process may not be accompanied by adequate solid theoretical foundations. Such deficiency in theoretical underpinnings causes a clash with the unique view of systems thinking which claims that the world has a structural nature. Korn (2020) referred to this conflict as a significant contributor to the fragmented literature that causes the current crisis of systems thinking. To cope with these problems, while trying “not to impose a structure” on the problematical situation being explored (Checkland and Poulter 2020), SSM researchers and practitioners need to ensure that the process of inquiry into the world is connected to or based on substantial social theories. In addition, the “isolationist stance” (p. 747) that SSM appears to adopt should be shifted towards a more interdisciplinary approach (Mingers 2000). That is to say, it is necessary for SSM researchers and practitioners to seek more intellectual engagement with other disciplines so that the full potential of this soft systems approach can be widely exploited. In this paper, we attempt to have the SSM inquiry process accompanied by the existing literature about evidence-based teaching to ensure that individual subjective meanings are connected to structural educational theories while trying not to impose these theories on the problematical situation being investigated. In this way, the paper can remain oriented to the problematical situation while preserving its theoretical underpinnings. Also, by employing the EBT framework in its action research approach, this study addresses the traditional gap caused by the separation between producers of research evidence and users of such evidence (Marshall et al. 2014) in order to call for collaboration, partnership, and commitment to shared learning from all stakeholders.

Interpretative Phenomenological Analysis

Interpretative phenomenological analysis (IPA) is an inductive qualitative research approach that focuses on the in-depth exploration of “participants’ lived experience” (p.
40) and how such personal experiences are interpreted by both the participants themselves and the researchers (Smith 2004). It was theoretically founded on the basis of phenomenology, hermeneutics, and idiography (Smith 2011). The term “phenomenological”, as in the discipline of phenomenological psychology originated from Husserl’s philosophy, highlights the concentration on the subjective individuals’ judgment about a particular phenomenon being explored (Smith 1996). When using IPA, the interpretation for these individuals’ perceptions has two sides: the participants themselves reflect upon the phenomena being explored, and the researchers make sense of such personal views through an analysis process.

From a methodological aspect, the most popular data collection method for IPA has been through semi-structured interviews, besides alternative approaches such as focus groups or observational notes (Brocki and Wearden 2007). Based on the assumption that qualitative research should seek to produce in-depth analysis and thus making generalizations needs to be conducted cautiously, numerous researchers asserted that there is no exact sample size for adopting IPA. The number of participants in IPA studies may vary from only one, e.g., Robson (2002), to the currently largest number of 48 participants, e.g., Clare (2003). Reid et al. (2005) stressed the “less is more” principle in IPA, and Smith et al. (2021) noted that IPA studies that are at a professional doctoral level often maintain their idiographic focus by having from six to ten participants in sampling sizes.

Despite its inability to test hypotheses (because of the inductive nature), IPA has made major impacts on numerous research disciplines as it reinforces the importance of unique insiders’ perspectives in exploring interesting, insightful attitudes towards a particular research question. It has been increasingly adopted in applied areas of physical and mental health. In this paper, IPA is adopted to explore the current situation of evidence-based teaching in the hospitality and tourism education system of Vietnam. Its “insiders’ perspective” is valuable as it offers the researchers an understanding of the possible insightful conflicts between various stakeholders, e.g., the government, educators, and enterprises. It is also expected to bring out how each stakeholder group makes sense of the concept of “evidence-based teaching” in the hospitality and tourism education system of Vietnam.

Research Methods

There are two primary research goals in this study:

1. To provide an understanding of why there is a lack of a framework for defining the sound evidence necessary for teaching in hospitality and tourism institutions in Vietnam. As a result, this paper highlights the roles of different stakeholders and the importance of the industry-education linkage, which is currently absent in the existing literature about the EBT concept.

2. To propose an EBT framework that provides guidelines for hospitality and tourism instructors in Vietnam in constructing more comprehensive teaching content and effective classroom practices.

To achieve these two goals, we adopt a hybrid use of SSM (Hanafizadeh and Mehrabioun 2018) as a process of inquiry into understanding the lack of an EBT framework in hospitality and tourism institutions in Vietnam. In particular, we first implemented the first two stages of SSM in combination with the IPA process (Smith...
et al. (2021) for understanding and identifying the problematical situation, and then applied the next two stages of SSM to build the systems thinking process for establishing an EBT framework for hospitality and tourism education in Vietnam. As such, while there are seven stages built in the SSM process, in this study we implemented only the first four stages of SSM concentrating mainly on identifying the problematical situation and designing a transformation process. This transformation essentially form a foundation for implementing the proposed structural changes and conducting educational activities accordingly to improve the problematical situation of hospitality and tourism education in Vietnam. The implementation of these four stages is detailed as follows:

**Stage 1: Understanding the Problematical Situation**

Based on the existing literature, we briefly summarize the current quality issues in hospitality and tourism education in Vietnam. Accordingly, the lack of an EBT framework necessary for teaching in this profession is presented as the perceived problematical situation where we mainly focus on stakeholders’ conflicting viewpoints and weak industry-education linkage.

**Stage 2: Problematical Situation Expressed**

This stage explicitly shows our hybrid adoption of the SSM process. In addition to following the structural thinking process of SSM, we also conducted online semi-structured interviews and adopted the IPA process introduced by Smith et al. (2021) to gain insights into stakeholders’ perspectives on the concept of educational evidence in the hospitality and tourism profession. Smith et al. (2021) suggested that doctoral-level IPA studies could have from six to ten participants in sampling sizes. Therefore, we recruited 10 participants as interviewees of the semi-structured interviews. The following IPA textual analysis and interpretation steps (Smith et al. 2021) were adopted in this stage:

1. “Reading and rereading” interview transcripts;
2. Making “exploratory notes” while reading the transcripts;
3. Drawing “experiential statements” from analyzing “exploratory notes”;
4. Seeking connections among “experiential statements” within each transcript;
5. Creating “personal experiential themes” (PETs) from connections found in step 4;
6. Repeating the five previous steps;
7. Creating “group experiential themes” (GETs) to capture shared insights or shared lived experiences across all participants from the sought PTEs.

Reid et al. (2005) noted that participants in IPA studies should be experts whose background, thoughts, and experiences may offer valuable insights about the phenomenon under exploration. In this study, interviewees were stakeholders who had been working in the hospitality and tourism profession in Vietnam for at least ten years, as well as students who had been enrolled in academic programs in this field. Except for students who already had internship experiences, i.e., they have involved in genuine workplace tasks, other participants held leaders’ positions in hospitality organizations and institutions. Therefore, all of these participants either had extensive knowledge and experience in the industry or the insights necessary for attaining the research goals of this study.
There are five stakeholder groups involved in the operation of the hospitality and tourism education system in Vietnam, i.e., policy-makers, employers, education providers, teachers, and students (Barrows and Walsh 2002a; Goodman and Sprague 1991; Le et al. 2018b; Lewis 1993). Each of these groups has two representing participants. The numbers of participants in each group are identical to ensure a balanced set of responses from these different stakeholder groups. Each online interview was approximately 20 min and was conducted via the Webex real-time video conferencing application in June 2021. Before responding to the interview questions, participants were provided with a definition of educational evidence, i.e., knowledge needed for designing curriculum and pedagogical practices in hospitality and tourism profession. The interview coding involved identifying words and phrases that responded to the following questions:

- **Question 1 (Q1):** What are the necessary sources of evidence that appear to be absent in the current curriculum design and pedagogical practices in hospitality and tourism institutions in Vietnam?
- **Question 2 (Q2):** What are some specific examples of evidence sources mentioned in Question 1?
- **Question 3 (Q3):** What causes (these) this absence(s) mentioned in Q1?

Since most participants in our study are experts whose background, thoughts, and experiences offer valuable insights about the problematical situation, their responses to the interview questions, when analyzed under the IPA process, provide significant contributions to the achievement of our second research goal. We ensure that the EBT framework, which we propose in the next two stages of this study, is not developed in an ad hoc manner. Rather, this framework is based on vast literature and reliable empirical data. Thus, it lays a solid theoretical foundation for conducting relevant curriculum renewal and pedagogical reforms necessary for the current situation of hospitality and tourism institutions in Vietnam.

**Stage 3: Root Definition of Relevant Systems**

Stage 3 of the SSM process started the “systems thinking” activities in which we applied two SSM techniques, the root definitions and CATWOE analysis (Checkland and Poulter 2020), to structure the thinking process and propose essential elements of the EBT framework for hospitality and tourism education in Vietnam. From the stakeholders’ perspectives revealed in the previous stage, we describe the foundation of a system for improving the identified problematical situation. Checkland and Tsouvalis (1997) noted that at the beginning of SSM process, “no choice of the most relevant of possible ‘relevant system’ is made” (p. 154). The term ‘relevant’ should be established throughout the problem-solving process of the SSM approach as more meaningful insights into the problematical situation are gradually gained. For this reason, there could be several potentially relevant root definitions. Therefore, in this study, although different root definitions that reflect various stakeholders’ worldviews can be constructed, we focus on developing only one root definition, which considers teachers as the leading actor and students as the clients (another root definition may view education providers as the actor and teachers as the client). Specifically, we aim to help teachers enhance teaching quality by identifying rigorous educational evidence. Therefore, we form only one system that concentrates on improving teachers’ understanding of multiple dimensions of EBT in the hospitality and tourism profession in
Vietnam. Other systems, which reflect other stakeholders’ perspectives, are not presented in this paper.

After presenting the proposed root definition, we explain it further by showing the six elements of the CATWOE analysis technique (Bergvall-Kareborn et al. 2004). The following questions, which are implied in each of these six elements, will be answered:

**Customer:** Who will benefit from the proposed system, and how the system benefit such people?

**Actor:** Who will be the agents of the process of transformation?

**Transformation:** What is the specific transformation process proposed in this study? In other words, what are the necessary dimensions of the EBT framework presented in this study?

**Weltanschauung:** Why is the proposed EBT framework feasible and desirable?

**Owner:** Who should be the sponsors for adopting the proposed EBT framework?

**Environmental constraints:** What are some of the limitations that prevent the adoption of the proposed EBT framework?

### Stage 4: Design of a Conceptual Model

In Stage 4, a model of the activity system needed to achieve the transformation was proposed. This model was built to accomplish what is described in the root definition. Here, we adopted the technique of “modeling” by Checkland (1999), which is “to assemble the minimum list of verbs covering the activities which are necessary in a system defined in the root definition, and to structure the verbs in a sequence according to logic” (p. 87). More specifically, we developed a handful of activities and structured them by adopting what Checkland and Tsouvalis (1997) suggested as “logical dependency” (p. 158) or “DIME (Dependency? Information? Material? Energy?) Technique” specified by Woodburn (1985). In other words, one particular activity needs to produce an output, e.g., information or material, for the next one in model. Accordingly, the arrows drawn in the model point to the direction of the activities which receive the output produced from the previous activities. In this way, the latter activity is considered dependent on the former, based on the ideas of “logical entailments” (Checkland and Tsouvalis 1997).

### Results

The results of the first four stages in the SSM hybrid approach were as follows.

#### Stage 1: Situation Considered Problematical

The COVID-19 pandemic has caused a major decline in the number of students enrolled in hospitality and tourism academic programs in Vietnam (Anh 2021; Thanh 2021). In addition, restrictions on traveling and physical distancing requirements have caused guest interactions to be kept at a minimum level and created significant challenges for students to acquire practical learning experience through internship programs (Bilsland et al. 2020). Yet, even before the outbreak of this contagious disease, there were significant quality issues in hospitality and tourism institutions in this developing country, which also played a role in making students hesitate to choose this profession. Besides the inconsistent
standards in curriculum design and program development, weak education-industry linkage has been reported. The current shortage of teachers with adequate academic backgrounds and practical industry experience has also had an impact on the academic programs (Le et al. 2018a; Losekoot et al. 2019).

Confirmed conflicts of interest among hospitality and tourism stakeholders make the education-industry linkage even more fragile. Le et al. (2018b) contended that the industry-education relationship in Vietnam has been predominantly economically driven, with business operations preferring to employ vocational students rather than graduates from higher education institutions, mainly for profitability. For higher managerial positions, international hospitality businesses tend to utilize staff from international bases rather than local human resources to enhance their competitive advantage. Such recruitment practices are causing students to have negative perceptions of their careers in the industry. As a result, institutions in Vietnam find it challenging to maintain students’ commitment to the industry. This lack of loyalty can lead to major workforce issues that require the attention of all relevant stakeholders.

To maintain students’ motivation and foster their continued hope in and loyalty to the profession, improving teaching quality by means of effective pedagogical strategies and sound educational evidence has been an important mission of hospitality and tourism institutions (Deale and Newton 2014; Zhong et al. 2021). Nevertheless, in Vietnam, there has not been a consensus on what counts as evidence necessary for teaching in this profession. In the next stage, we will use interview data and the IPA process to interpret how these stakeholders make sense of the concept of evidence in hospitality and tourism education.

**Stage 2: Problematical Situation Expressed**

**IPA Analysis for Responses to Interview Question 1 (Q1) and 2 (Q2)**

When analyzing responses to Q1 and Q2, we based on the existing literature of EBT to categorize sources of evidence mentioned by participants into three groups: research-based (RB), industry-based (IB) and evidence that comes from teachers’ assumptions, knowledge and experience (TB). In other words, RB, IB, and TB evidence are the “group experiential themes” (GETs) drawn upon the “personal experiential themes” (PETs) (Smith et al. 2021) from which we generated the exploratory notes during the analysis process. To show the analysis results, we summarized the participants’ roles and their responses in Table 1. The transcript codes used in Table 1, e.g., RB1, RB1.1, are explained in Table 2, where the GETs are demonstrated to indicate different types of educational evidence being absent in hospitality and tourism institutions in Vietnam.

In Tables 1 and 2, each stakeholder group mentions different evidence sources that are necessary yet currently absent in teaching for the hospitality and tourism sector in Vietnam. As explained before, these sources are clustered into three groups, i.e. (1) research-based (RB), (2) industry-based (IB) evidence and (3) teachers’ knowledge and experience (TB). For each of these dimensions, participants provided different examples. For example, to illustrate the first research-based source of evidence that is currently absent, i.e., “a consistent hospitality and tourism curriculum and qualification framework based on international standards” (RB1), the first participant, who belonged to the policy-maker group, referred to the ASEAN Tourism Curriculum and Qualification Framework. However, the fifth participant, a representative of the institutions’ administrators, thought that the Vietnam Tourism Occupational Standards (VTOS) and the Australian Vocational Education...
| Participant number | Roles (or Stakeholders) | Job title | Organization | Responses to Q1 | Responses to Q2 |
|--------------------|-------------------------|-----------|--------------|-----------------|-----------------|
| 1                  | Policy-maker            | Government Officer | Vietnam National Administration of Tourism (VNAT) | RB1, IB1, IB2, TB1 | RB1.1, IB1.2, IB2.2, TB1.1 |
| 2                  | Policy-maker            | Government Officer | Ho Chi Minh City’s Department of Labor – Invalids and Social Affairs (DOLISA) | IB3, IB4, TB1 | IB3.1, IB4.1, TB1.1, TB2.2 |
| 3                  | Employer                | Training Manager | A five-star hotel located in Ho Chi Minh City | IB1, IB2, IB3, IB4, IB5, IB6 | IB1.1, IB2.1, IB3.1, IB4.1, IB5.1, IB6.1 |
| 4                  | Employer                | Tour Guide Manager | A major travel company from Vietnam | RB2, IB2, IB3, IB4, IB5 | RB2.1, IB2.2, IB3.1, IB4.1, IB5.2 |
| 5                  | Educational provider    | Vice Principal | A hospitality and tourism college | RB1, RB3, IB1, IB4, TB1, TB2, TB3 | RB1.2, RB1.3, RB3.1, RB3.3, IB1.1, IB4.1, TB1.1, TB2.1, TB3.1, TB3.2 |
| 6                  | Educational provider    | Head of Tourism Faculty | A private university in Ho Chi Minh City | RB1, RB2, RB3, IB3, IB4 | RB1.2, RB1.4, RB2.1, RB3.2, RB3.3, IB3.1, IB4.1 |
| Participant number | Roles (or Stakeholders) | Job title                          | Organization                        | Responses to Q1 | Responses to Q2 |
|-------------------|-------------------------|------------------------------------|-------------------------------------|----------------|----------------|
| 7                 | Teacher                 | Instructor in Rooms Division       | A hospitality and tourism college   | RB1, RB1.1, RB1.2 | RB3, RB3.1, RB3.2 |
|                   |                         |                                    |                                     | IB1, IB1.1       | IB1, IB1.1      |
|                   |                         |                                    |                                     | IB2, IB2.2       | IB4, IB4.1      |
|                   |                         |                                    |                                     | IB6, IB6.1       | TB1, TB1.1      |
|                   |                         |                                    |                                     | TB2, TB2.1       | TB2.1, TB2.1    |
| 8                 | Teacher                 | Instructor in Culinary Arts        | A hospitality and tourism college   | RB1, RB1.3, RB1.4 | RB3, RB3.2, RB3.3 |
|                   |                         |                                    |                                     | IB1, IB1.1       | IB1, IB1.1      |
|                   |                         |                                    |                                     | IB3, IB3.1       | IB4, IB4.1      |
|                   |                         |                                    |                                     | IB4, IB4.1       | IB3, IB3.1      |
| 9                 | Student                 | Student enrolled in “Hotel Front Office” program | A hospitality and tourism college | IB2, IB2.1       | IB2.1, IB2.1    |
|                   |                         |                                    |                                     | IB3, IB3.1       | IB3.1, IB3.1    |
|                   |                         |                                    |                                     | IB4, IB4.1       | IB4.1, TB1.1    |
|                   |                         |                                    |                                     | TB1, TB1.1       | TB2.2, TB2.2    |
|                   |                         |                                    |                                     | TB2, TB2.1       | TB3.1, TB3.1    |
| 10                | Student                 | Student enrolled in “Tour Guide” program | A hospitality and tourism college | IB2, IB2.1       | IB3, IB3.1      |
|                   |                         |                                    |                                     | IB3, IB3.1       | IB4, IB4.1      |
|                   |                         |                                    |                                     | IB4, IB4.1       | IB3, IB3.1      |
|                   |                         |                                    |                                     | TB1, TB1.1       | TB2.1, TB2.1    |
|                   |                         |                                    |                                     | TB2, TB2.1       | TB3.1, TB3.1    |
| Types of evidence (RB, IB, TB) | Necessary sources of evidence that appears to be absent in curriculum design and pedagogical practices (Responses to Q1) | Specific examples of sources of evidence (Responses to Q2) |
|-------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Research-based (RB)           | RB1: A consistent hospitality and tourism curriculum and qualification framework based on international standards | RB1.1: The ASEAN Tourism Curriculum and Qualification Framework |
|                               |                                                                                                               | RB1.2: The Vietnam Tourism Occupational Standards (VTOS)     |
|                               | RB2: Research on international or national destinations, history, culture, and geography                       | RB1.3: Australian Vocational Education and Training (VET) system |
|                               | RB3: Research-based pedagogical strategies and practices                                                     | RB1.4: The American Hotel and Lodging Educational Institute (AHLEI) training and certification materials (DVDs, textbooks, skill guides) |
| Industry-based (IB)           | IB1: Updated Standard Operation Procedures (SOP) being implemented by international businesses                | IB1.1: SOPs carried out by InterContinental Hotel Group (IHG) or by the Accor Hotel chains |
|                               | IB2: Technological innovations being applied in the industry                                                 | IB2.1: Knowledge and skills in using the latest software in hotel management |
|                               | IB3: Employers' involvement and feedback in curriculum design                                               | IB2.2: The application of Virtual Reality (VR) technology in the tourism industry |
|                               | IB4: Employers' feedback on educational outcomes                                                              | IB3.1: Personnel holding training director/manager positions in industry businesses can offer insights for designing practical curriculum or training programs |
|                               | IB5: Feedback from customers about services                                                                   | IB4.1: Employers' feedback on interns’ or staff members’ performance |
|                               | IB6: Updated information and data from companies providing services in data analytics and market insights    | IB5.1: Online review sites can be quality sources for understanding customers’ insights |
|                               |                                                                                                               | IB5.2: Hotel comment cards or tourists’ feedback during and after receiving lodging or traveling services |
|                               |                                                                                                               | IB6.1: Industry reports produced by global hotel and tourism data companies such as STR (from CoStar Group), OTA Insight |
| Types of evidence (RB, IB, TB) | Necessary sources of evidence that appears to be absent in curriculum design and pedagogical practices (Responses to Q1) | Specific examples of sources of evidence (Responses to Q2) |
|-------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Teachers’ knowledge and experience (TB) | TB1: Teachers’ industry experience  
TB2: Teachers should have relevant teaching qualifications  
TB3: Teachers should have attributes of creativity | TB1.1: Teachers should have 3–5 years of experience in the industry  
TB2.1: Teachers should be pedagogically certified according to international standards, e.g. Certified Hospitality Trainer (CHT) or Educator (CHE) programs by the AHLEI  
TB2.2: Teachers can deliver effective online lessons  
TB3.1: Teachers are open to new ideas and are willing to change and adapt  
TB3.2: Teachers should be open to new duties, roles, or methods |
and Training system should be employed to set the standards and guidelines for hospitality and tourism education. These diverse illustrations indicate that a consistent qualification framework is absent in hospitality and tourism education in Vietnam.

IPA Analysis for Responses to Interview Question 3 (Q3)

To further explain what may have caused the lack of aforementioned types of evidence, we collected responses to interview question 3 (Q3), i.e., “What causes (these) this absence(s) mentioned in Q1?”. Again, we adopted the IPA process introduced by Smith et al. (2021) to interpret the collected data. The results were grouped according to stakeholders’ perspectives. In Tables 3, 4 and 5, we demonstrate specific examples where exploratory notes from the interview transcripts of different stakeholder groups, i.e., policy-makers, education providers, and teachers, are underlined in different colors. These notes were coded and labelled on the right margin of Tables 3, 4 and 5. The labelled notes, also considered as the “personal experiential themes” (PETs), helped the researchers capture each stakeholder group’s shared insights.

Policy-Makers’ Insights  Overall, the interview results show that both participants representing the policy-maker group emphasized the lack of an industry-education linkage in the current hospitality and tourism education system. These participants contended that more evidence from the industry should be gathered and systematically applied in teaching

### Table 3  Exploratory notes and PETs taken from a participant representing policy-makers

| Interview Transcript | PETs (or coded exploratory notes) |
|----------------------|-----------------------------------|
| “Vietnam is participating in the Mutual Recognition Agreement on Tourism Professionals (MRA-TP) in ASEAN. Therefore, to take advantage of the MRA-TP and the tourism integration in ASEAN, education providers need to enhance the competitiveness of their training establishments (RI) and focus on policies to keep talented teachers who have a lot of industry experience and pedagogical skills (RI). The current shortage of qualified teachers and the lack of industry-education linkage (LI) is partly caused by the ineffective and inefficient bureaucracy institutions and poorly paid teachers (PM), especially in public institutions.”  

(Government Officer, having worked at the VNAT for 22 years) | RI: Responsibility of education providers in creating industry-education linkage  
LI: Lack of Industry-education Linkage  
PM: Poor management practices of education providers |
and training in this profession. Noticeably, these participants highlighted the role of education providers in creating and maintaining the currently weak education-industry linkage. Their responses critiqued the institutions’ poor management practices, which allegedly caused the shortage of qualified and motivated teachers. Table 3 shows an example of how the IPA process was applied to obtain the interpreted results.

### Table 4 Exploratory notes and PETs from a participant representing educational providers

| Interview Transcript                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| “We understand the need to have quality research- (IR) and industry-based evidence (II) to accomplish our educational mission in this sector. However, we can not gain such evidence by ourselves. The government needs to provide more support to us (LG), e.g. by initiating and funding projects that connect us with the industry. I believe employers will be more motivated to be involved with our work as the government officially, continuously, and financially reinforce the need to have education-industry linkage in teaching (LG). Everybody says we need to look at the real practical Standard Operation Procedures (SOPs) implemented in the large hotel chains (II), yet these are also the companies’ copyright materials. So, it is not easy to get access to such sources of industry-based evidence (OI). Also, quality research-based resources for teaching in this profession are expensive (OR) to us. For example, subscribing to high-ranking journals in this profession requires a large budget that our institutions can not afford (OR), given our current tuition policy (LG). Increasing tuition, however, will lead to our loss of enrolled students (LG), especially during and after the COVID-19 pandemic.” (Vice Principal at a hospitality and tourism college in Vietnam) |

**PETs (or coded exploratory notes)**

| IR: Awareness of the importance of research-based evidence |
| II: Awareness of the importance of industry-education linkage |
| OI: Obstacles to access quality evidence from the industry |
| OR: Obstacles to access quality research-based evidence |
| LG: Lack of governmental support |

and training in this profession. Noticeably, these participants highlighted the role of education providers in creating and maintaining the currently weak education-industry linkage. Their responses critiqued the institutions’ poor management practices, which allegedly caused the shortage of qualified and motivated teachers. Table 3 shows an example of how the IPA process was applied to obtain the interpreted results.

**Education Providers’ Insights** While the two participants from the policy-maker group criticized institutions for the ineffective management practices, the institutions’ administrators who participated in this study implicitly denounced a lack of governmental guidance and support in constructing and adopting a comprehensive EBT framework. The interview transcript of one participant in this stakeholder group was analyzed under the IPA process in Table 4.

Accordingly, both participants believed that more systematic guidelines and support from the government and the industry were essential for them to accomplish their mission.
Specifically, they asserted that the government should build mechanisms which help establish and structure collaboration and communication between educational institutions and the industry. Also, there should be more governmental expenditure on projects contributing to the construction and enhancement of the industry-education connection.

**Teachers’ Insights** Teachers’ viewpoints were somewhat similar to administrators’ perspectives on what evidence is currently missing in the curriculum and pedagogical practices. They appeared to complain about a lack of support from both employers and institutions’ administrators in maintaining quality teaching standards which require the adoption of different types of sound educational evidence. As these teachers had had more than ten years of experience in both the industry and teaching, they highlighted the need for all three dimensions of evidence. Both participants highlighted the importance of strategic plans which help institutions and teachers develop industry-education linkage. Such programs need to be funded and implemented by the government, the institutions and the teachers themselves. These participants also pointed out a stereotype about research-based teaching, where experienced teachers in the hospitality and tourism profession tend to believe in the power of their industry experience rather than research-based evidence. Table 5. shows the interpretation of one teacher’s lived experience.

**Employers’ Insights** The lack of both research- and industry-based evidence was mostly emphasized in the responses of two representatives of hospitality and tourism employers. These interviewees noted that although their primary duties were business management,
they were aware of their responsibility to become involved in the educational processes to serve the industry. However, as they were already burdened with their main jobs, they required that institutions be more proactive in constructing collaborative projects where employers can participate in educational activities. Reinforcing the literature, these employers denounced the current education system as insufficient in terms of providing students with the required practical workplace skills. They confirmed that large hotel chains or travel service companies prefer management staff from international bases, as these employees have better professional and communication skills.

**Students’ Insights** The students, as they had completed their internship programs, noticed the gaps between what they had studied in their academic programs and how companies are really run. Interview results indicated that they needed more opportunities, support and the right to develop in realistic work environments. One of the participants referred to the industry-education mismatch that he experienced during his internship as demotivating and leading to negative perceptions of his career in the industry. In addition, both shared that they would love to have teachers who were also practitioners or managers at large hotel chains or major travel companies, as they believed teachers who had industry experience would deliver more practical and compelling lectures.

In this step of SSM, using interview data and adopting the IPA process, we have revealed various perspectives among different stakeholders regarding the lack of an EBT framework in hospitality and tourism education in Vietnam. Analysis results align with what Le et al. (2018b) highlighted about the need to have “a collective response” from three crucial stakeholders, including government agencies, educational institutions, and industry in addressing the quality issues of the hospitality and tourism education system of Vietnam. While such collaboration is essential, the ongoing conflicts between these stakeholders appear to arise from their expectations for each other in expending the necessary collective efforts. These currently unfulfilled expectations are deemed to cause the current inadequate EBT approach in hospitality and tourism education in Vietnam. In the next step, we will describe the foundation of a system that could be used to improve the current situation.

**Stage 3: The Root Definition of a Relevant System**

From the stakeholders’ perspectives expressed in stage 2, different root definitions, CATWOEs and conceptual models can be formed for various systems. However, since this paper aims to improve teaching quality through the identification of rigorous educational evidence, we focus on a system for teachers’ comprehensive understanding of EBT in the hospitality and tourism profession. Therefore, in this stage, a root definition and CATWOE analysis will be formulated for this system. The other systems are not presented in this paper.

For a system to improve teachers’ understanding of EBT in the hospitality and tourism profession, the root definition is presented as follows:

A policy-maker-owned system; operated by the policy-makers, institutions’ administrators and teachers; to encourage teaching based on comprehensive, rigorous, practical and updated sources of evidence in the hospitality and tourism profession in Vietnam; by proposing a new EBT framework that incorporates various dimensions...
of evidence necessary for teaching in this profession; within the constraints of the current fragmented and overlapping management system of hospitality and tourism education system, the limited financial resources and the effects of the COVID-19 pandemic.

The above root definition can be explained further through the six elements of the CAT- WOE analysis. These are presented as follows:

**Client:** students as the people benefiting from the proposed EBT framework.

Students enrolled in the hospitality and tourism academic programs in Vietnam will benefit from a comprehensive EBT framework that values the three dimensions of educational evidence, i.e. the research- and industry-based evidence and the teachers’ knowledge and experience. First, the research-based evidence will ensure that academic programs are based on international standards that are effective and recognized worldwide. Thus, students can be better prepared to engage in the professional environment of the industry, and their qualifications can be used to enhance their occupational mobility. The research-based dimension of educational evidence also requires that sound pedagogical strategies developed from rigorous studies are adopted and implemented. Second, the industry-based dimension enhances the employment rates for students, particularly in hiring for managerial positions that require more advanced knowledge and skills. Last, teachers’ expertise and experience are significant in delivering fascinating and practical lectures. Also, teachers who consider themselves to be learners alongside their students will treat deep knowledge in subject matters as objects of inquiry and accordingly stimulate creativity and innovations necessary for students to adapt to the rapid changes of this industry.

**Actor:** policy-makers, institutions’ administrators and teachers as the agents of process transformation and change.

The proposed EBT framework needs to be adopted and implemented by hospitality and tourism teachers in their daily tasks. Teachers must be provided with sufficient guidelines and support from their leaders and policy-makers in designing curriculum and pedagogical practices for teaching based on quality educational evidence.

**Transformation:** the change in which hospitality and tourism teachers in Vietnam are transformed from not being fully aware of various dimensions of EBT (input) into having a better understanding of EBT dimensions (output).

The proposed EBT framework is expected to improve teachers’ understanding of EBT and encourage them to search for and utilize comprehensive, rigorous, practical and updated sources of evidence in their teaching. The transformation process can be demonstrated as an input-output system, as shown in Fig. 5 below.

Based on the existing literature and the interview data obtained in stage 2 of the SSM process, this study proposes a new EBT framework for hospitality and tourism education in Vietnam. The three dimensions of this framework are illustrated in Fig. 6.

**Weltanschauung:** the established worldview of assumptions that makes the proposed EBT framework meaningful (or why the proposed EBT framework is feasible and desirable).
The EBT framework proposed for the hospitality and tourism education system in Vietnam is feasible because it is accompanied by specific examples of sources of evidence needed for making the framework practicable. The framework could be brought into practice and evaluated rigorously through collective efforts and proactive collaboration from three important stakeholders, including government agencies, educational institutions, and industry.

Undoubtedly, the proposed EBT framework brings about desirable benefits for various stakeholders. If implemented systematically, it could address different gaps in stakeholders’ needs and expectations. These gaps, according to Zopiatis and Constanti (2007), could be categorized into the following types:

- The gap between students’ expectations towards education providers and their actual learning experience;
- The gap between students’ expectations towards the industry and their actual industry experience;

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Fig. 5 The transformation process in the form of an input-output system

Fig. 6 An EBT framework proposed for hospitality and tourism education in Vietnam
• The gap between students’ expectations towards the workplaces and the actual environment of hospitality organizations;
• The gap between industry requirements and the results of educational processes;
• The gap between education providers’ control over students’ industry experience and the students’ actual industry experience.

Owner: the sponsors for the adoption of the proposed EBT framework.

For the private educational sector, the owners are the sponsors that finance the process of employing and implementing a comprehensive EBT framework. These can be the shareholders and the administrators of educational institutions. For public institutions in Vietnam, the owners are the government departments that are in charge of administering institutions’ operations. For example, vocational colleges are supervised by the Vietnam National Administration of Tourism (VNAT) and the Directorate of Vocational Training, a section under the Ministry of Labor – Invalids and Social Affairs (MOLISA). For the higher education sector, the Ministry of Education and Training (MOET) would be the owner.

Environmental constraints: Constraints in the broader system.

The current management system of hospitality and tourism institutions in Vietnam is fragmented and has departments whose duties overlap with each other (Anh 2017). While the group of higher education institutions is under the direct supervision of the MOET, vocational training institutions are administered by the MOLISA. Meanwhile, regulations on enrolment, training, accreditation and teacher qualification standards are constructed separately by the two ministries. Programs and training systems are also inconsistent among institutions, leading to their non-recognition of each other. Because of this fragmented and overlapping management system, the proposed EBT framework may turn out to be difficult to adopt or implement in spite of its necessity and elegance. This is not to mention the financial constraints that prevent institutions from accessing high-quality research- or industry-based sources of evidence. Finally, yet importantly, the current COVID-19 pandemic is threatening the operation of the whole hospitality and tourism sector. The proposed EBT framework can only be meaningful if there are students enrolled in this profession and the educational system recovers from the disruptions caused by the global pandemic.

Stage 4: Design of a Conceptual Model

In this stage, we build a model which includes a series of necessary activities to accomplish what is listed in our root definition. The elements of this conceptual model need to be formed using verbs that describe the actions we plan to perform in the next stages. Figure 7 presents our proposed conceptual model.

As can be seen from Fig. 7, the arrows drawn in the model point to the direction of the activities which receive the output produced from the previous activities. In other words, one latter activity depends on the outputs produced from the former activity (or activities). For example, “propose a new and comprehensive EBT framework” is an activity which needs the outputs, i.e., information and knowledge, from previous activities which include reviewing related literature about EBT, identifying industry needs and ways companies are
practically run, and seeking various stakeholders’ perspectives on EBT. Another example, which also comes from the conceptual model developed in Fig. 7, is that the activity of “seek agreement on the proposed EBT framework” requires that “a new and comprehensive EBT framework” has already been developed (as an output) in the previous activity.

It should be noted that, according to Checkland and Tsouvalis (1997) and Bergvall-Kåreborn (2002), it is difficult to have a completely specified conceptual model to represent one particular root definition. There are always a number of possible alternative conceptual models developed to accomplish what has been defined in the root definition. In addition, the skills and experience of people who assemble activities in the conceptual models in this stage of the SSM process determine whether the specified models are genuinely “in line with the root definition” (Woodburn 1985). In this study, the author who designs the conceptual model (shown in Fig. 7) has had 10 years working in the hospitality and tourism industry in Vietnam. This set of experiences in life has enabled the author to adopt the “DIME (Dependency? Information? Material? Energy?) Technique” (Woodburn 1985) more handily.

**Discussion**

We summarize and discuss three primary findings obtained through the SSM stages implemented in this study as follows:

Firstly, through the hybrid use of SSM, this study has revealed various perspectives among different stakeholders regarding the lack of an EBT framework in hospitality and tourism education in Vietnam. Analysis results align with what Le et al. (2018b) highlighted about the need to have “a collective response” from three crucial stakeholders, including government agencies, educational institutions, and industry in addressing the quality issues of the hospitality and tourism education system of Vietnam. While such
collaboration is essential, the ongoing conflicts between these stakeholders appear to arise from their expectations for each other in expending the necessary collective efforts. These currently unfulfilled expectations are deemed to cause the current inadequate EBT approach in hospitality and tourism education in Vietnam.

Secondly, it should be noted that this study considers SSM as the protagonist in terms of its methodology to achieve its research goals although the adoption of IPA techniques (in Stage 2 of the SSM process) also contributed significantly to obtaining the findings about specific sources of evidence necessary for constructing an EBT framework for hospitality and tourism education in Vietnam. In other words, this hybrid use of SSM approach has enhanced the primary methodology, i.e. SSM stages, to attain research goals. The implemented CATWOE analysis and the constructed root definition in Stage 3 of the SSM process has utilized the findings obtained from the IPA analysis of Stage 2 to form the core purpose of the notional human activity system developed in this study, i.e., the EBT framework proposed for hospitality and tourism education in Vietnam. Noticeably, the constructed root definition can be employed as a “heuristic device” (Checkland and Tsouvalis 1997) for further exploration towards EBT in the context of hospitality and tourism education in Vietnam. It should not, however, be a means of assertions of knowledge in this discipline. Similarly, the conceptual model specified in Stage 4 of the SSM process (shown in Fig. 7), which was designed to accomplish what had been defined in the root definition, will contribute to the implementation of the next stage, i.e., Stage 5, where the specified conceptual model (established on the basis of “logical dependency”) needs to be compared with what is perceived to exist in the real world. Since the purpose of Stage 5 is to generate debate about possible changes which might be made to improve the perceived problematical situation, the conceptual model lays an important foundation for the strategic planning process coming afterwards. In other words, this conceptual model is expected to contribute to the production of possible effective outcomes resulted from the comparison conducted in Stage 5.

Lastly, by having the SSM inquiry process accompanied by the EBT framework, this study overcomes the lack of solid theoretical foundations which is often referred to as a limitation of the SSM approach (Mingers 2000). Accordingly, the paper remains its focus on the problematical situation while ensuring its theoretical underpinnings. The evidence-based dimensions employed and integrated with SSM process in this study also addresses the typical gap caused by the separation between academia who produce research evidence and practitioners who use such evidence for practical problem-solving. Specifically, having introduced various theoretical EBT dimensions through the soft systems thinking approach, this study highlights the importance of effective collaboration and communication among various stakeholders when dealing with problematical situations in professional educational settings.

**Conclusion and Implications**

This paper adopts a hybrid use of SSM as a process of inquiry into the lack of a framework for defining sound evidence necessary for hospitality and tourism education in Vietnam. By following SSM stages in analysing a problematical situation and conducting interviews with various stakeholders, we identified issues surrounding insufficient sources of evidence needed for teaching in the hospitality and tourism profession in Vietnam. Accordingly, power relations and stakeholder expectations in forming an EBT framework were
described through the IPA process. The research also revealed the essential roles of all stakeholders, especially those with decision-making power, in bringing about meaningful actions through the CATWOE analysis conducted in the SSM process.

The structured thinking process in the SSM approach and the IPA method have also enabled us to develop an EBT framework for hospitality and tourism education in Vietnam. Our proposed framework addresses three essential sources of evidence for instructors in the hospitality and tourism profession: (1) research-based technical and pedagogical principles and methods, (2) industry-based materials to ensure education-industry linkage and (3) instructors’ knowledge and assumptions about and experience with their teaching roles in the classroom. In the paper, we provided specific examples of the three sources with the hope that such illustrations can act as guidelines for conducting relevant curriculum renewal and pedagogical reforms in hospitality and tourism institutions in Vietnam.

The proposed EBT framework and the hybrid use of the SSM process in this paper have significant implications for the current teaching quality issues in hospitality and tourism institutions in Vietnam. First, our interpretation results restated the need to bring forth “a collective response” from three important stakeholders, including government agencies, educational institutions, and industry, in addressing the quality issues in Vietnam’s hospitality and tourism institutions. These results align with what Le et al. (2018b) emphasized in their study about different stakeholders’ perspectives in addressing the currently missing industry-education linkage in the hospitality and tourism professional education system of Vietnam. However, in addition to what Le et al. (2018b) have explored in their study, this paper also reveals the ongoing stakeholders’ expectations for each other in exerting the collective efforts required to improve the current situation. These unfulfilled expectations need to be addressed through stakeholders’ intention to collaborate and communicate more effectively and faithfully. Only through more effective collaborative actions can teachers in this profession find and utilize quality evidence available in research, the industry, and themselves.

Second, this paper highlights the importance of a research-based dimension of educational evidence that has been emphasized by numerous studies, such as Hargreaves (1996), Mitchell and Sutherland (2020), and Rajaram (2021). This study indicates that such a dimension appears to be underrated by numerous hospitality and tourism teachers in Vietnam, particularly those working in vocational training colleges. In the post-COVID-19 era, the hospitality and tourism sector is expected to undergo more rapid transformational changes that require the professional education system to continuously refine its strategic adaptation and development. Researchers and educators in this industry need to collaborate and work closely with each other in searching for new directions for the industry and the education system. The previous curriculum and pedagogical approaches in this profession will soon be outdated because of the COVID-19 pandemic. Teachers who have based their instruction merely on their prior knowledge and experience will quickly become stressed and lost in the new teaching and learning environment driven by the global pandemic. It is time for hospitality and tourism teachers in Vietnam to construct, search for and utilize rigorous research-based evidence for the sake of the effectiveness of their teaching, which may also contribute significantly to the recovery of the industry in the post-pandemic period.

Last, in the conceptual model developed in stage 4 of the SSM process, we propose that training workshops be designed and implemented to improve teachers’ understanding of the various dimensions of evidence necessary for teaching in the hospitality and tourism profession in Vietnam. Although this conceptual model has not been practically implemented and evaluated, it stresses the need to provide hospitality and tourism teachers with
sufficient training and different types of support to help them adapt to the “new normal” context set by the COVID-19 pandemic. Such support will benefit the teachers and boost students’ hope in and loyalty towards an industry that has been substantially damaged by the pandemic (Zhong et al. 2021).

**Limitations and Future Research**

In this paper, the hybrid use of SSM is applied only at the level of an inquiry process. Although it has proposed a transformation process in the form of a new EBT framework, it has not brought about changes to improve the problematical situation in a practical way. In other words, the inquiry process of SSM in this paper only serves to shed light on meanings implicit in the current education system of the hospitality and tourism sector in Vietnam and create a corresponding ideal type of purposeful action. It thus lacks an action-oriented nature of SSM, which means that the SSM process employed in this work could not be considered “an epistemology” (Checkland and Scholes 1990) for intervening usefully in the problematical situation. Our adoption of SSM is only at the degree of identifying the problematical situation. Therefore, future research should aim to carry out the next stages of the whole SSM process, i.e., stages 5, 6 and 7, in order to bring about and evaluate structural changes for learning and development purposes.

Another limitation related the adoption of SSM approach in this study comes from the process of designing the conceptual model in Stage 4 of the SSM process. Given that the role of conceptual models is to represent “the minimum number of logically contingent activities that need to be carried out” (Bergvall-Kåreborn 2002), there are always a number of possible alternative conceptual models developed to accomplish a particular root definition. In other words, the quality of these models depend on the ability and experience of the people who developed them. Schregenberger (1982) contended that knowledge and experience in fields such as management or organizations can become the “enabling force” for the construction of these conceptual models. Therefore, provided that the conceptual model designed by the authors of this study can be limited by their experience of the world, it is recommended that Stage 4 of the SSM process is combined with other techniques such as the “qualifying function” technique suggested by Bergvall-Kåreborn (2002) to enrich the model-building phase of SSM. More specifically, the “qualifying function” concept, originating from the Dooyeweerdian philosophy, refers to the function that depicts the intrinsic structure of a particular thing and accordingly gives it an identity. Incorporating the “qualifying function” concept into the modelling phase of the SSM process can generate significant benefits such as helping built systems be viewed from new and different perspectives. For example, using qualifying function to elicit different possible Weltanschauungs (in the CATWOE analysis) can lead to different views on what makes the Transformation meaningful. In this study, the Weltanschauung was specified in a way that if the Transformation happens, i.e., the change in which hospitality and tourism teachers in Vietnam are transformed from not being fully aware of various dimensions of EBT (input) into having a better understanding of various dimensions of EBT (output), this change would help close the different gaps in stakeholders’ needs and expectations and contributes to the improvement of educational quality. From another Weltanschauung which focuses more on the human resources perspective, the change can be viewed as a method to develop teachers’ competencies and motivate them (by equipping them with new knowledge and skills). In this way, both
Stage 3 and 4 of the SSM process could be enriched and better connected to each other. As Bergvall-Kåreborn (2002) suggested, the “qualifying function” technique has the potential to enrich the conceptual models by directing the transformation process (T) and accordingly makes these models “less conservative” (p. 47).

In terms of the IPA research methodology, despite including representatives of all key stakeholders, the online interviews were conducted separately, so we could not observe and record stakeholders’ interactions that perhaps could better express their conflicts and different perspectives. In future research, other qualitative research techniques, e.g. conducting workshops or group interviews, that allow the observation and analysis of stakeholders’ interactions need to be adopted. Quantitative approaches could also be considered for investigating how the various roles, norms and values present in the real world relate to the conceptual model.

Finally, among various root definitions that can be generated in stage 3 of the adopted SSM process, this paper selected only one that focuses on teachers’ understanding of multiple dimensions of EBT in hospitality and tourism education. According to Bergvall-Kåreborn et al. (2004), more root definitions of relevant systems should also be drawn out to discover more possible systems that can bring about changes benefiting other stakeholders, such as policy-makers and employers in the industry.

Author Contribution All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Thanh-Thao Luong, Van-Nam Huynh, Eunyoung Kim. The first draft of the manuscript was written by Thanh-Thao Luong and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Data Availability The authors confirm that all data generated or analysed during this study are included in this manuscript.

Declarations

Competing Interests The authors have no competing interests to declare that are relevant to the content of this article.

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