A cross-cultural study on the career counseling service ecosystem: implications for higher education marketing

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Routledge
Taylor & Francis Group

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ABSTRACT

A career counseling service (CCS) provides an important measure of student satisfaction and contributes to the shaping of a higher education marketing strategy. However, the body of knowledge in the higher education domain is scant on how a CCS is created and delivered to suit the needs of students and the wider society. This study uses an explorative multiple-case study of the CCS across three different cultural contexts: UK, Italy, and China. The study adopted a service ecosystem perspective, building on contingency theory (i)to analyze the CCS as a tri-level scheme – that is to say, at the micro, meso, and macro levels – and identify the themes and underlying constructs in the co-creation of the CCS at each level and (ii)to highlight the disparities in CCSs across different cultural contexts. Six dominant themes in CCSs emerged – namely, quality assurance, a student-centered approach, mental health, industry collaboration, promotion of service, and digital platforms. The findings revealed that the role of the CCS is transitioning from a mere job placement service to a strategic and administrative function, which interacts with and influences various actors in the higher education ecosystem. Across the different cultural contexts, disparities in the identified themes were ascertained and explained.

1. Introduction

1.1. Career counseling service (CCS)

The career counseling service (CCS) has been viewed as a vague area in career interventions, with a wide range of agreed terms, definitions, and responsibilities in this field. It has its roots in 'career or vocational guidance', 'job or career counseling', 'occupational coaching', 'psychoeducational models', and more (Herr, 1997). This lack of agreement can be attributed to linguistic and conceptual differences (Athanasou & Van Esbroeck, 2008) and how vocational services have evolved (Herr, 2013). Career counseling arose from Frank Parsons's posthumous publication in 1909, *Choosing a Vocation*, which effectively

defined counseling as a profession (Gatzanis, 2002). Throughout its evolution, four distinct traditions have emerged (Hartung, 2010); (*a*) individual differences: the vocational guidance movement in the early twentieth century merely matched people to jobs; (*b*) individual development: emerging in the mid-twentieth century based on the notions of career patterns, life-career stages, and work as one of several life roles; (*c*) social learning: this milestone came with the advent of the social-cognitive behavioral perspective in the last quarter of the twentieth century, focusing on individual thoughts, beliefs, and learning experiences that influence career choice; and (*d*) social constructionism: the most recent tradition, emphasizing relationships, story, life themes, and meaning-making processes.

The understanding and boundaries of CCS have changed over the course of these four traditions. However, today, the notion of CCS draws its meaning mostly from constructivism paradigms. Thus, CCS emphasizes self-awareness and self-directing (Naicker, 1994; Shertzer & Stone, 1981), employing a holistic approach, which means integrating the job seeker's competencies, skills, and work habits with information on general interests, education, and work experience (Litoiu & Oproiu, 2012). The 'life design' approach to occupational education (Savickas, 2012) takes these intricacies into account and asserts that cultivating individual careers is a nonlinear process of lifelong learning, which draws on various unplanned and dynamic influences.

Moving to the post-pandemic era, the number of students enrolling in universities has shown conspicuous growth globally (HESA, 2023; Shaban & Ahmad, 2021), intensifying the competition among universities to attract talented students. University league tables and rankings are a major indicator of university credibility and are used by prospective students to compare universities (Kethüda, 2022). A key indicator in these rankings is based on employability after graduation – namely, 'graduate prospects' (Complete University Guide, 2022) or 'employer reputation' (QS Quacquarelli Symonds, 2022b). Moreover, the number of universities is increasing, giving students greater choice options and making the competition fiercer for university places. In China, for example, the number of public colleges and universities has increased from around 2,400 in 2011, to nearly 2,800 in 2021 (National Bureau of Statistics of China, 2022). Moreover, with the growth in international students, providing career advice and placing international graduates in local industries have become major concerns for universities (Cameron et al., 2019). These developments turn CCS into a source of competitive advantage and, therefore, makes its study in a global context increasingly important.

By and large, career services are regarded as comprehensive services to support individuals in making occupational, educational, and training choices as a sound basis for their career development (Watts & Sultana, 2004) This process involves not only vocational guidance but also experiential learning, mentoring, and alumni communities as key elements in a lifelong process (Dey & Cruzvergara, 2014). In this paper, we use the term 'career counseling' as one of the most widely used references (Schiersmann et al., 2012) to explore the career service network we see in universities today.

1.2. Career counseling in different social contexts

Although career counseling is a widely used term in different social contexts, each country has its unique history and its distinctive traditions of provision. It should be noted that

vocational services reflect the political, economic, cultural, social, educational, and work-force contexts in which they operate (Guay et al., 1996). A general tendency exists in various countries, especially those who have experienced higher economic development, to adopt similar career service structures in line with North American and European models. Despite this influence, distinctive traits can be seen in career services in these countries, reflecting their discrete social and cultural characteristics. For example, the career services in New Zealand mirror cultural considerations that were established as a legal obligation rather than an ethical commitment, as is the case in other countries (Furbish et al., 2016). It reflects the cultural context of Māori (indigenous people) who account for 14.6% of the New Zealand population.

Moreover, the World Bank review shows that countries' economic and social status impacts career service systems in diverse ways (Watts & Fretwell, 2004). The review demonstrates that high-income countries tend in general to have better developed career guidance systems than middle-income countries. In particular, they have more career information and knowledge at their disposal to support such systems. Whereas the majority of European countries have been shifting to more government – and EU-regulated job markets, South Africa, as part of its transition from an apartheid state to a more open and integrated society, places emphasis on non-governmental vocational organizations to maintain diversity and promote inclusion (Watts & Fretwell, 2004).

In addition, career professional education is at different stages of development in each country because its historical experience has been unique. In Australia, the Career Industry Council of Australia (2022) validates and reviews academic qualifications to reach the required professional standards. This practice is different from procedures in the UK, where The Association of Graduate Careers Advisory Services (AGCAS) supports career outcomes for individuals in higher education, while other organizations, such as Career Development Institute, offer qualifications in career guidance and qualifications for other individuals working in the field of career development.

1.3. Service design

With the rise of the service economy, the need for understanding, implementing, and managing services has emerged as a specific domain, spreading to other disciplines, such as service marketing and management (Foglieni et al., 2017). In 1982, G. Lynn Sho-stack published the article, 'How to Design a Service', which defined the embryonic idea of service design and proposed a service blueprint as a design tool. Since then, service design has greatly expanded from a customer perspective, and the technology has been developing fast. The service field has not only expanded its boundaries in service marketing, operations, and management but also addresses issues on how to understand customer emotions, feelings, and needs. In 1991, Michael Erlhoff and Birgit Mager introduced service design at the Köln International School of Design as an embryonic disciplinary field (Foglieni et al., 2017). They explored how to apply design approaches to the creation or re-creation of a service, with the aim of bringing a memorable experience to those in receipt of the service.

Over time, service design has evolved in its complexity in response to societal changes. Sangiorgi (2009) defined three phases in an evolving pattern of service design – namely, interactions, complexity, and transformation. It opens with an interaction paradigm,

abstracting from interaction design discipline, practices, and tools into service design (Wetter-Edman et al., 2014). Principally, it considers those interactive touchpoints between users and suppliers of the service. In this phase, service design focuses on one-to-one interaction, in which users are taken as the center of study. In the following phase, the paradigm is complexity, with service design starting from interaction design on the organization level and moving to become a connector to design value co-creation among different stakeholders in a complex environment, so as to improve customer experiences with marketing and management knowledge (Cautela et al., 2009). Value co-creation is defined as a resource integration and service exchange process involving numerous actors that are linked within a service ecosystem (Frow et al., 2016; Vargo & Lusch, 2017). The third phase refers to transformation design (Burns, 2011), which can instigate a fundamental change in organizational culture and public service sectors, especially contributing to 'complex problem-solving space' by interdisciplinary collaborators.

Ever since its inception, service design has continued to evolve, but it is now shifting in a 'zooming out' manner. It has moved from the concept of the service-dominant logic to the ecosystem perspective – in other words, the 'service ecosystem' (Kimbell & Blomberg, 2017; Nelson & Stolterman, 2012; Sangiorgi et al., 2017). The service ecosystem is defined as 'comparatively self-contained, self-regulating system[s] of resource-incorporating actors linked by shared system arrangements and common value creation through service exchange' (Lusch & Vargo, 2014; Vargo & Lusch, 2016). This perspective calls attention to the socio-historic contexts composed of multiple institutions, which lead to value determination and the interactions noted (Akaka et al., 2013). It has brought a new slant to service design, calling attention to the alignment of actors, processes, technologies in global service networks (Parida & Jovanovic, 2021), and social roles and elements (Akaka & Chandler, 2011), all managed through design-based approaches and tools in an interwoven ecosystem (Ostrom et al., 2015).

1.4. Service design in higher education career services

Higher education is one of the largest service sectors. Yet, few studies exist in the literature that explore and expand our understanding of the sector and improve higher education services from a service-design perspective (Carvalho & Goodyear, 2018; Martinez-Maldonado et al., 2017). From a practical perspective, the traditional way of providing services in higher education created a rift between 'what the higher education institutes offer' and 'what students need'. Coupled with a growing number of higher education institutes, student satisfaction with university services is becoming one of the main selection criteria for students. However, the higher education sector maintains its own tradition of an 'up-bottom' approach, which entails the conventional way of designing university services from the perspective of the program decision makers (e.g. governments and university administrators) rather than the standpoint of students (Goodyear & Retalis, 2010; McKenney & Reeves, 2014; Svihla & Reeve, 2016). However, this has been changing more recently with a higher utilization rate of technologies in higher education services, resulting in a pedagogical shift towards developing more student-oriented services (Carr-Chellman & Duchastel, 2000; Conole & Fill, 2005; Reiser, 2001).

Service design is shown to be an effective approach to improving the provision and experience of services in higher education. Yet, this has received insufficient attention

from conventional higher education management (Ford & Bowen, 2008). As the field of service design and its boundaries grow, more scholars have turned their attention to its application in higher education in order to design and redesign core services. Felix et al. (2011) applied service design tools – namely, personas, customer journey maps, and service blueprints – to improve the learning space. To enhance service quality using a systemic design thinking perspective, Jones (2017) proposed a framework for community-centered approaches to promote flourishing by designing soft services in university mental health services.

A limited number of studies (Nie et al., 2019b; Sultan & Wong, 2010) have attempted to understand how service design knowledge can improve university services to help students find their own career paths and life values. Nie et al. (2019b) proposed a service social ecology map to understand the career service ecosystem and to define service improvements in a higher education institution in Italy. Later, they linked developments in the vocational service systems with the student well-being perspective in China and Italy, and they discussed the potential that the service design approach holds for students' psychological health and for helping them to carve out their career paths (Nie et al., 2019a). Cassidy et al. (2021) studied students' engagement in UK higher education from a service-dominant logic perspective and found that, for student engagement strategies to be successful, the perspectives of students – as the users of the system – should be explicitly acknowledged in the service design.

1.5. Research gaps and questions

Higher education is a complex system designed to ultimately serve students as the end users. It can be viewed as a service ecosystem with various actors influencing the service. Service providers (i.e. universities) and receivers (i.e. students), as the principal actors, mutually interact in this ecosystem but they are not alone. Universities, external employers, and public bodies also interact directly and indirectly, which exert a significant influence on the service provided to students.

The survey of literature from a service design perspective reveals several gaps. First, although the service design view on higher education services is apt, there are very few studies in the literature that take this view to co-create and deliver higher education services. Second, extant studies are mostly limited to provider–receiver interactions at the micro level. Traditional university management fails to account for an overarching view of the service as an ecosystem that is influenced by actors at different levels and tends to adopt a rudimentary view of the university as the creator of services and students as mere consumers. Finally, our understanding is limited on how these ecosystems are shaped differently under the influence of diverse cultural environments. In fact, there are few comparative studies in the literature that address these issues.

This research aims to bridge these gaps by looking at the CCS, one of the essential higher education services, employing a service design lens. We investigate the underlying constructs that impact the higher education service at the micro, meso, and macro levels. Then, we compare different service ecosystems in three diverse cultural contexts, the UK, Italy, and China, using contingency theory to unearth the peculiarities of each ecosystem. Accordingly, the article addresses the following research questions.

RQ1: What are the underlying constructs of co-creating value in a CCS from a service ecosystem perspective?

RQ2: How do CCSs differ across, and how are they influenced by, different cultural contexts?

2. Theoretical foundations

To address the research objectives of this article, a theoretically eclectic approach is adopted. We deploy a service ecosystems perspective from service-dominant logic as the meta-theory to provide a foundation for addressing the research questions. Next, for case selection and the interpretation of the results of our multiple-case study, we draw on two theories: contingency theory and the Lewis model. The rest of this section describes each element of the theoretically eclectic underpinnings of this article.

2.1. Service dominant logic and service ecosystems

This article builds on service-dominant logic (Vargo & Lusch, 2016) as the meta-theory and takes the service ecosystem perspective within the service-dominant logic as the main perspective. The ecosystem perspective goes beyond a firm-centric view, where the value is delivered to the receiver by the firm, to a multi-layered ecosystem, where value is co-created and delivered to the receiver according to the holistic dynamics in the ecosystem and the interactions amongst these layers (Chandler & Vargo, 2011).

Taking a service ecosystem perspective is vital to understand the intricacies of the multi-level higher education setting. Thus, this article adopts system-level thinking based on Van Wijk et al. (2019) and Vargo et al. (2020) to shed light on the co-creation of value in a CCS. Different levels of an ecosystem – namely, micro, meso, and macro – involve different interactions and resources but remain interdependent within the entire ecosystem (Chandler & Vargo, 2011). Within the service ecosystem, the micro level involves the service receiver having one-to-one interactions with individuals from the service supply system. Such interactions are direct and reciprocal, leading to the co-creation of value by both parties. At the meso level, the service receiver interacts with a service or a community of services provided by one or more service organizations. Meso-level interactions can be both direct and indirect. The macro level entails public bodies and cultural groups that develop, disseminate, and enact national and cultural norms, legislation, and schemes, which influence both service receiver and service provider. At this level, receiver–provider interactions are indirect and many simultaneous service exchanges occur in the ecosystem. Table 1 presents a description of the service ecosystem levels and provides relevant examples from the higher education context.

2.2. Contingency theory

Different theoretical lenses can be adopted to study the service ecosystem containing CCSs. The theory of planned behavior has been widely used in the higher education context – see, for example, Simiyu et al. (2020). It can be an appropriate lens to study and compare students with the behavioral intention of finding a job through the CCS

Table 1. Description of micro, meso, and macro ecosystem levels and examples from higher education.

Ecosystem level	Description	Examples in higher education
Micro level	The micro level considers the touchpoints between a service receiver and the supply system, which mainly focuses on one-to-one interaction.	A new graduate receives career advice in a meeting with a member of CCS staff.
Meso level	The meso level entails interactions between a service receiver and a service or a community of services provided by one or more service organizations.	A final-year undergraduate student attends a job fair organized by the university and local employers.
Macro level	The macro level covers national identity and cultural belonging, specifically national policies, norms, laws, and schemes that influence both service receiver and service provider.	Ministry of Education announces a new higher education quality assessment scheme.

versus those students who use the CCS to explore job opportunities, devoid of firm intentions to take on a role. The theory can be used to further unearth the impact of student intentions, as recipients of the service, on the overall performance of the CCS. Another relevant theoretical view in studying the CCS is social exchange theory – see, for example, Clark et al. (2017), Romani-Dias & Carneiro (2020). The theory is based on the reciprocity of relationships between service provider (CCS) and receiver (students) where the CCS offers benefits in terms of career provision to students, whilst satisfied students provide the university with loyalty and positive word of mouth in return.

Another appropriate theoretical lens is contingency theory. It originates from the work of Burns (1961) and Lawrence and Lorsch (1967), inter alia. Contingency theory posits that no single best solution or organizational structure exists that works better than all others. Rather, different systems are contingent upon exogenous factors in the system's environment. According to the theory, different systems can achieve high performance by making a 'fit' between their structures and the exogenous factors in the environment they operate (Donaldson, 2001). As the factors vary according to different cultural contexts, systems maintain the fit by adapting to new situations and adopting the best decisions in response to the cultural factors.

Since one of the research objectives of this article is to make a comparative study of different cultural contexts and to distinguish the disparities, contingency theory was chosen as the most fitting theoretical lens. In this article, the system is synonymous with higher education institutes under scrutiny in a specific cultural context. This is not to be confused with the ecosystem that involves external actors in addition to the higher education institute. The exogenous factors are the national regulations, norms, and culture of the country in which the system is located. These factors are within the ecosystem but exogenous to the system, and it was assumed that they remain stable within each country but differ from one country to another. Each institute establishes a fit with the external national, cultural, and regulatory factors by revising how its services are configured internally, including the CCS. For example, when education authorities announce that the number of students receiving internships will be a new criterion for national university ranking, universities would look for greater industry collaboration to secure internship positions. Thus, contingency theory offers the appropriate theoretical lens to analyze the results of our multiple-case study and to distinguish, juxtapose, and explain cross-cultural differences.

2.3. The Lewis model

The Lewis model, developed by Richard Lewis in the 1990s, is a behavioral theory that divides countries' cultures into the three distinct types of 'linear-active', 'multi-active' and 'reactive', together forming the Lewis model triangle (Lewis, 2006). These typologies are not fixed silos, but cultures span a range from one type to another. Linear-active cultures tend to be factual, task-oriented, and highly organized, preferring to complete one task at a time to fulfill the objective. Multi-active cultures tend to be more emotional and loquacious with strong bonds to people in general, undertaking several tasks at a time and loosely following the agenda. Reactive cultures are good listeners who seldom initiate a discussion. They prefer to establish the others' position and then react to it based on their own judgment.

In this article, we first used the Lewis model to diversify our selection of cultural contexts. We selected one country from each cultural type for our multiple-case study. Second, the Lewis model, together with contingency theory, was used to interpret the differences observed among the selected cultural contexts.

3. Methodology

This article adopts an explorative multiple-case study approach to address the research questions. Case study is an inductive empirical methodology that is appropriate to unearth the 'underlying constructs' of a multi-faceted phenomenon (our first research question) and to explore 'how' research questions (our second research question) (Yin, 2003). A multiple-case study design is generally more robust than a single case study and is suitable when the researcher expects 'contrasting results but for predictable reasons'. Aimed at developing theoretical knowledge (Yin, 2003), it is a fitting design for this study. The unit of analysis is the CCS within the higher education institute.

3.1. Case selection

To facilitate a cross-cultural study, we aimed at collecting empirical evidence from a range of higher education institutes in different cultural contexts. To ensure diversity in case selection, the typologies proposed by the Lewis model (Lewis, 2006) were selected and the following countries were selected for each cultural type: Italy (representing the multi-active type), China (representing the reactive type), and the UK (representing the linear-active type), as shown by the yellow check marks in Figure 1.

Next, several universities were selected from each country from the QS World University Ranking (https://www.topuniversities.com/). Several criteria were employed for our selection from the QS ranking. First, large public universities were selected to best represent the cultural context in which they operate because private or foreign universities might have unique services or structures that are not representative of their cultural context. Moreover, this provides some homogeneity for subsequent cross-cultural comparison (comparing apples to apples) and ensures that the observed differences are specific to the cultural context and not due to the size or type of university. Second, the selected university had to have a designated CCS or department that provides the service to its undergraduate and postgraduate students. The link to the service or department must be available on the university's webpage with an identifiable contact person(s).
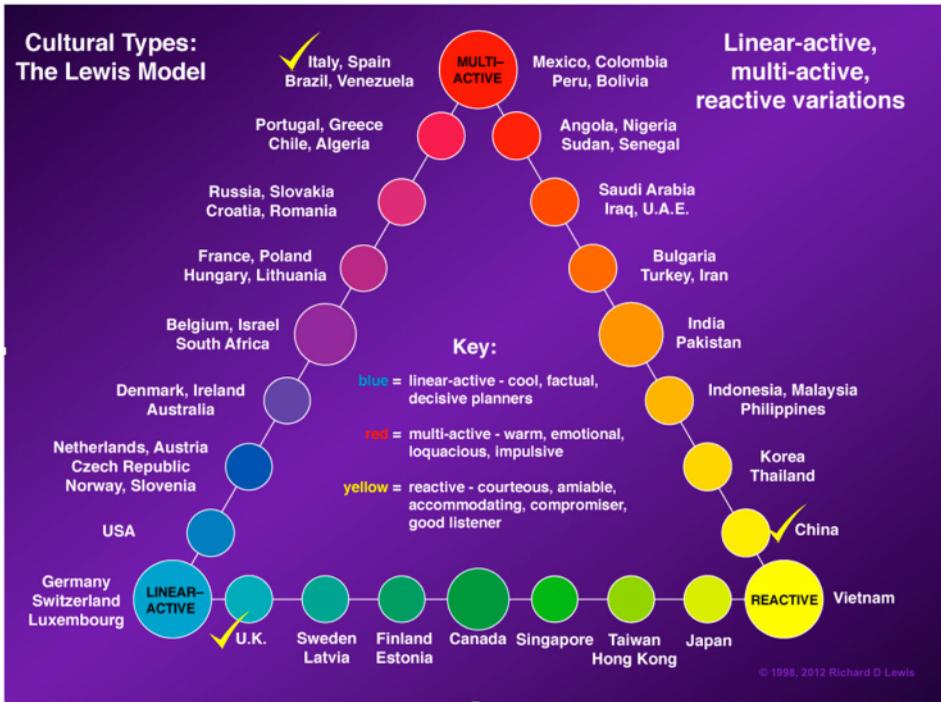
Figure 1. Ensuring diversity in case selection based on the Lewis model (2006).
Note: Yellow checkmarks show the selected countries for the multiple-case study.

Based on these criteria, several universities were selected in each country and an email was sent to the contact person identified from the webpage. The email explained the research project and asked whether the recipient is interested in having an online or face-to-face interview. Agreements to be interviewed were received from two universities in each cultural context, six universities in total.

3.2. Interview protocol

Based on the research questions, a set of questions was developed. It consisted of 16 open-ended questions on the service provided to students, how they are offered, approaches to promoting the service, collaboration with local employers, national regulations, cultural considerations, and improvements to be made at university and national levels.

Once the questionnaire was developed, it was sent to two senior academics, one who was an expert in higher education studies and the other an expert in service design for verification, to ensure that the questionnaire was robust and addressed the research questions. The experts provided their feedback. Notably, the service design expert advised revision of some of the questions that contained theoretical jargon (e.g. mesosystem), because the respondents might not be familiar with the academic terms used in service design literature. The questionnaire was revised based on the comments received. Next, it was sent to the respondents via email prior to the interviews.

3.3. Data collection

Semi-structured interviews with selected cases were the primary source of data for this study. The interviews were conducted face to face in Italy and China and online in the UK. The interview language for Italy and the UK was English, and the interviews in China were conducted in Mandarin. The interviews were audio recorded with the consent of the interviewees. In a subsequent step, the recordings were manually transcribed, and the transcriptions of the interviews in China were translated into English by the first author. Table 2 presents the profile of the cases and interview details.

Semi-structured interviews were complemented by two other sources of data. First were the university-specific data. These included the university webpage, annual reports, and external reports on the cases by third parties (e.g. government and audit organizations). They were used to triangulate the data collected from the interviews. Since all the cases publish employability reports annually, the reports of the past three years (2018–2020) were reviewed. In addition, digital artifacts were used, where available, as another variant of university-specific data. They included CCS-related mobile apps designed by the cases in addition to virtual reality used for career training (in China only). Using digital artifacts as a supplementary source of data for case studies provides a more in-depth insight into cultural features and the technical operation of cases (Yin, 2003).

The final source of data was secondary data about other public universities in the UK, China, and Italy, including university reports, government reports, and reports by ranking organizations. They were used to extend the generalizability of the findings to the national context in addressing the second research question. The secondary data were collected at a later stage to deepen country-level insights, which had already been obtained through the analysis of cases.

3.4. Quality of the case study

To ensure the quality and rigor of the case study, the criteria proposed by Yin (2003) were used. These criteria include construct validity, internal validity, external validity, and reliability. Table 3 shows the tactics used in this case study to increase its quality.

Table 2. Profile of cases and interview details.

Case	Position of interviewee	Years of experience	Type and length of the interview	Language
Italy (case 1)	Individual career counseling coach	7	Face to face – 65 min	English
	Job market specialist	5	Face to face – 45 min	English
Italy (case 2)	Head of internship center	11	Face to face – 70 min	English
UK (case 1)	Career service manager	6	Online – 65 min	English
UK (case 2)	Talent team specialist	4	Online – two interviews of 60 min and a follow-up interview of 40 min	English
China (case 1)	Deputy director of the career guidance center	18	Face to face – 40 min	Mandarin
	Career advisor	3	Face to face – 60 min	Mandarin
China (case 2)	Career guidance lead	11	Face to face – 65 min	Mandarin

Table 3. Tactics used to ensure the quality of the case study.

Criteria	Meaning	Tactics to address criteria
Construct validity	Establishing correct operational measures for the concepts being studied	- Multiple sources of evidence were used: face-to-face and online interviews, secondary data including university employability reports, webpages, government and audit reports, and digital artifacts. No contradictory data were found. - The interview protocol was reviewed and verified by two academic experts prior to sending it to the interviewees. - Interviews were of sufficient length (40–70 min) to ensure ample exploration of cases and their CCS. Follow-up interviews were conducted where necessary. - After analysis, the draft of the article was sent to and reviewed by the interviewees.
Internal validity	Establishing causal relationships	- During coding, patterns from the cases were discovered and matched. - The interviews conducted in Mandarin were transcribed and translated into English by the first author, who is an expert in the study topic and both languages, to ensure that the English translation is consistent with the other interviews conducted originally in English.
External validity	Establishing a domain to which the study's findings can be generalized	- An eclectic theoretical view consisting of service design, contingency theory, and the Lewis model was deployed for research design and explanation building. - Specific criteria for case selection were considered so that the cases represent the higher education environment of their country. Further secondary data from other universities were collected and supplemented the data analysis to facilitate cross-cultural analysis.
Reliability	Demonstrating that the data collection can be repeated with the same results	- An interview protocol was used. - The questions were sent to interviewees in advance of the interview.

3.5. Data analysis

Following the interviews, the audio recordings were manually transcribed by the authors. To analyze interview data, a manual coding process based on Miles and Huberman (1994) and Gioia et al. (2013) was conducted to code the transcripts. The transcripts were read thoroughly by each author individually, and each transcript was broken down into major sections. Each section was reviewed following the Miles and Huberman (1994) approach.

First, to address the first research question, the data were analyzed building on the service ecosystem perspective, as described in subsection 2.1, to identify the boundaries of service ecosystem levels in the context of our study. Second, the analysis identified six main themes across the data. These are the main pillars for the co-creation of a CCS in HE. Thirdly, each theme was explored and illustrated within each level of the service ecosystem.

Once all the interviews were coded and analyzed for each case (within-case analysis), in order to address the second research question, a cross-case analysis was conducted by

comparing and juxtaposing the second-level codes from the three cultural contexts. Secondary sources of data, as explained in section 3.3, were used to triangulate the interview data and provide further information at the national level for cross-case analysis. The cross-case analysis was guided by contingency theory to unearth the differences among the cultural contexts. The results of the within – and cross-case analysis are presented in section 4.

4. Findings and discussion

The results of this study are twofold. First, the study shows how a CCS in higher education is co-created at the micro, meso, and macro levels (first research question addressed in sections 4.1 and 4.2). Second, it unearths the differences among the cultural contexts studied (second research question addressed in section 4.3).

4.1. Establishing the boundaries of service ecosystem levels

Building on the service ecosystem perspective, the data analysis first established the boundaries of the service ecosystem levels in the context of this study. For example, the codes 'national regulations' and 'Brexit' were attributed to the macro level, whereas the codes 'student feedback about CCS' were attributed to the micro level. All sections of the transcripts were analyzed and attributed to one of the three levels of service ecosystem (macro, meso, and macro). Table 4 demonstrates the identified codes and representative quotations for each ecosystem level. Attributing the data to service ecosystem levels delineated the boundaries of each level in the context of our study, indicating dynamism within each level as well as inter-level exchanges occurring within the ecosystem. t also facilitated further analysis of data within each level.

4.2. Multilevel analysis for the co-creation of the CCS

Once the boundaries of the service ecosystem levels were identified, the data were further analyzed within each level (macro, meso, and macro) to unearth the underlying themes for the co-creation of the CCS. Six themes emerged from the data analysis at each level. First, we present the identified themes following the recommendations of Gioia et al. (2013) for building data structure (Figure 2). The 1st order codes were derived directly from the empirical data – that is, the interview transcripts. The 2nd order themes synthesize the 1st order codes to present theoretical constructs for the co-creation of the CCS.

Next, we attributed the identified codes and themes (from Figure 2) to each ecosystem level (from Table 4) to show how each code under each theme is specified at each ecosystem level (Table 5). The rest of this subsection provides a multilevel analysis of each theme supported by evidence and quotations from the data.

4.2.1. Theme 1 – quality assurance
This was a consistent theme across all levels and contexts. At the micro level, collecting student feedback through surveys and questionnaires from individuals and group work sessions and keeping a longitudinal record of feedback were consistently observed in

Table 4. The identified codes and representative quotations for each service ecosystem level.

Service ecosystem level	Identified codes	Representative quotations from interviewees
Micro level	Student feedback, survey, face to face, appointment, group work, mental health consultation, mock interview, faculty, department	' … we have a **drop-in service**, which is conducted by my team where students can just come in. They don't need to book. They can be seen in, obviously a busy time of year, there is quite a bit of a wait, but they can be seen straight away. We also then offer **bookable appointments** with our senior career consultant consultants … our senior career consultants link to our faculties, usually, pick[ing] up between two and three departments each … We also offer **telephone and online** access; we have got a website, and we also have provision available on our Moodle: our online learning platform.' Career service manager (UK – case 1) ' … in terms of **measuring the quality of services,** I suppose on a kind of most basic level, we collect **feedback** from our students. So that can be through while we will go out and try to solicit feedback [directly] from them through **surveys, questionnaires,** things like that. We've recently surveyed students' ideas on the accessibility of the service. Sometimes, we do not really use their input as solid measures, but basically as a way of capturing their perception about the service.' Individual career counseling coach (Italy – case 1)
Meso level	Placement, internship, group career counseling, job fair, career workshop, open day, alumni network, other universities, industry collaboration	'There is also a part that advocates **internships** for **international organizations** and our **industry partners**. We support visits; anyone who gets an internship offer will be subsidized with different amounts of money. Last year, there were several students who did internship at UNESCO, they are given the subsidy … We also work closely with **large state-owned enterprises, military industry, aerospace, science, and technology.** There are many **companies** [such as] Huawei and ZTE. They will recruit some students every year during our open day.' Career guidance lead (China – case 2) 'It is more about your wellness … Then, there is another one [referring to collaboration], that is the formative or educative one … We work with **high schools** … [to ensure] that students during their high school years go to some job placement in order to see how the works environment is.' Individual career counseling coach (Italy – case 1)
Macro level	National student survey, teaching excellence framework, Brexit, labor market, government policy, national platform, ministry of education	'The **Ministry of Education** holds a meeting with all public universities every year, and CCS is in the agenda. There will be one report each year released after the meeting to strengthen employment and entrepreneurship.' Career advisor (China – case 1) 'In terms of the **UK government,** I think we're becoming more and more accountable to them. So, we used to be governed and regulated by an organization called **HEFCE** (Higher Education Funding Council) that would oversee our activities. They worked in quite a partnership approach. We're now under something called **Office for Students,** and they are now holding universities more and more accountable as opposed to working in partnership that we had through things like, if you're aware of the **TEF** (Teaching Excellence Framework), and **subject level TEF,** we're now being held more accountable for that as opposed to working in partnership with **HEFCE**.' Talent team specialist (UK – case 2)

1st order codes	2nd order themes

- University rankings as an indicator of quality
- Collecting and analyzing student feedback about the quality of education
- Collaboration with other universities for joint activities
- Setting collective milestones with other regional institutes
- Restructuring university services at the national level to form a network of interconnected services

⟹ **Quality Assurance**

- Involving CCS at earlier stages of study
- Inclusion of parents in the service design
- Considering inclusion and diversity in the CCS design
- Working with local organizations to address university leavers
- Building CCS around a long-term view of career development

⟹ **Student-centered Approach**

- Involving career consultants from different ethnic and faith backgrounds
- Bespoke mental health support for students
- Mental preparation for job market
- Collaboration with local vocational physiology institutes
- National guidelines on mental health and wellbeing

⟹ **Mental Health**

- Collaboration with local industries for internships, placements
- Job fairs and open days
- Connecting early-year undergraduates and international students to industries
- Assessing employers based on their reputation
- Training and study camps with national key industries

⟹ **Industry Collaborations**

- Aesthetics, the layout of departments, and user-friendliness of CCS
- Campus tours and free online educational packages
- Hosting national and international conferences and events

⟹ **Promotion of Service**

- Digitals tools to connect students to local employers
- Digital platforms to connect students and CCS
- Ad-hoc usage of digital platforms to connect with external organizations
- Digital tools to promote CCS among local community
- Advocating internships and training students for the digital era

⟹ **Digital Platforms**

Figure 2. A summary of the identified codes and themes from the cases.

all cases. At the meso level, counterintuitively, the cases mostly expressed activities of a collaborative nature with other universities, despite the competition. 'Setting collective milestones with other regional institutes' and 'joint supervision' were examples of such collaboration.

At the macro level, national and international rankings were the most critical indicators of quality. Universities heavily devoted resources to the criteria measured by these rankings, such as employer reputation and alumni outcomes. In addition, three cases

Table 5. The identified themes and the codes within the themes for each service ecosystem level.

Theme Level	Quality assurance	Student-centered approach	Mental health	Industry collaboration	Promotion of service	Digital platforms
Micro	Collecting student feedback through surveys, questionnaires, and focus groups, keeping a longitudinal record of feedback, conducting both quantitative (e.g. statistical) and qualitative analysis of the collected data	Maximizing students' inclusion through, for example, including 'silent communities' of students, expanding CCS to the whole student journey, inclusion of students with special needs in service design, inclusion of parents in service design	Providing tailored mental health support to students, employing career consultants from different ethnic and faith backgrounds, focusing on career mental preparation through psychological support on the pressures in the external labor market	Internships, placements, and students' employment services at university	Attention to aesthetics, the layout of the department, user-friendliness of service	Using digital platforms to connect students to CCS, offering and promoting services to students through digital platforms
Meso	Collaboration with other universities for joint supervision and other activities, setting collective milestones with other regional institutes, providing education to local companies and grassroots	Working with local organizations and NGOs to follow up on school and university leavers	Working together with local vocational physiology institutes	Close collaboration with local industry, holding job fairs and open days, addressing mismatches between university and industry interests especially for early-year undergraduates and international students, assessing employers based on their reputation	Providing prospective students and local community with campus tours and free online educational packages	Ad-hoc usage of digital platforms to connect with other universities and local service providers, to promote university services among local community, and to connect students to local employers
Macro	National and international university rankings, restructuring university services at the national level to form a network of interconnected services	Building CCS around a long-term view of career development	Meeting national guidelines and regulations on mental health and wellbeing	National practical training and study camps especially for national 'key industries'	Hosting national and international conferences and events	Using digital platforms to connect universities to national bodies, holding virtual meetings between the Ministry of Education and universities to promote employment guidance, advocating internships, and training students for the digital era

mentioned reform or restructuring of all university services, including CCS, nationally to move from 'a group of fragmented services' to 'a network of interconnected services'.

The following quotations from a talent team specialist (UK – case 2) show how the quality of service is monitored at the micro and meso levels.

> So, in terms of measuring the quality of services on a kind of most basic level, we collect feedback from our students. We go out and try to solicit feedback through surveys, questionnaires, things like that on different aspects. [For example,] we've recently surveyed students on the accessibility of the service …

> One of the main measures that we use is the "destination of leavers from higher education" and now it has changed to "graduate outcomes". It's basically six months after a student graduated from us, we would contact them, and we would find out what they were doing, what level of employment they're in, based on industry classification codes … and that would give us a percentage of our students that are in employment or studying.

> [At meso level] the other [quality measure] is to go to the other grassroots, villages, counties, and towns. We do temporary training for grassroots. There is also the practice of visiting local companies frequently to observe the level of their services and keeping a record of that.

4.2.2. Theme 2 – student-centered approach

Designing the CCS and other services around student needs and expectations was widely observed. Unlike theme 1, which showed normative motives (e.g. complying with internal policies or improving in ranking), this theme was meant to maximize students' inclusion and long-term benefits. Proactive approaches employed by universities to identify 'silent communities' of students, expanding the CCS to support students through the whole 'student journey' and taking a long-term perspective of career were examples of the initiatives for this theme. The following quotation from a talent team specialist (UK – case 2) shows how macro-level social considerations were integrated into their CCS.

> … what students can see in the short-term is not clear enough. For example, if the salary is relatively high … , does it mean that you can get long-term and good development in this company? Not necessarily … what we give is a macro view … If you only tell them [the students] which company is good and which company is not so good at a shallow level, [or] which salary is high or not, this is only a very short-term, very short-sighted benefit. So, we want to give a macroscopic social development rhythm and deeply analyze future trends … we hope we can give a macro and broad direction to guide on the development of industry, including the country's economic construction goals, and … create what economy values … and to offer long-term career development.

4.2.3. Theme 3 – mental health

Mental health and physiology emerged unanimously. Providing tailored mental health support to students (micro), working together with local vocational physiology institutes (meso), and meeting national guidelines on mental health and wellbeing (macro) were the identified constructs in all of the cultural settings. At the micro level, career consultants from different ethnic and faith backgrounds were employed to improve personal psychological consultation. Moreover, a focus on 'preparation' was observed, specifically in Italy and UK, through providing psychological support on the pressures students would face in the external labor market. The following quotation from a career counseling coach

(Italy – case 1) highlights the importance of mental health in CCSs and emphasizes preparation from the early stages.

> Sometimes counseling is all about psychological [work]. It is more about your wellness, or your personal problems that can impact on your career path. Things such as your personality and your family. Then, there is another one, … and that is about the mental health when you work. Preparation for the work environment starts from high school. We work with high school students in what we call in Italy (an Italian phrase) that students during their high school have to go to some job placement in order to see how the works environment is.

4.2.4. Theme 4 – industry collaboration

Collaboration with industries to create rich CCSs emerged as another theme that was consistently reflected in all the studied contexts. Internships, placements, and students' employment with industrial partners were mentioned by all the cases. Job fairs were the most common means of connecting students to industry. However, a mismatch was observed between university and industry interests. On the one hand, industries show little interest in working with early-year undergraduates because they have limited technical knowledge and understanding of the environment. Moreover, both cases from China expressed concern about an insufficient understanding of international students by industries in the Chinese cultural working context. On the other hand, universities were not overly keen to collaborate with all employers because of high student expectations and low employer reputations. The following quotations show the two sides of the mismatch.

> It is absolutely necessary to consider the employer's stance for industrial internships. They won't be happy to look at a year-one student who just came to look for no purpose or an international student who knows little about Chinese working culture. It affects their productivity. Career advisor (China – case 1)

> … one example of that would be, [name of the university] is targeted by a lot of leading recruiters. Sometimes, the recruiters that want to come to campus, aren't always the recruiters that the majority of our students want to see or the majority of destinations that they would like to go to. Talent team specialist (UK – case 2)

4.2.5. Theme 5 – promotion of service

The attention of CCS providers to issues such as aesthetics, the layout of departments, and user-friendliness of services (micro level) has been increasing as a way of promoting university services. Other examples found at the micro level include a one-stop service hall that satisfies all the needs of students from printing to booking a CCS appointment (Italy) or using robots to greet students and ask about their preferences concerning the services they need and the jobs they are interested in (China). At the meso and macro levels, universities deployed various means such as hosting conferences and events, as well as providing prospective students with campus tours and free online educational packages to promote their service. The following quotation from a career advisor (China – case 1) shows the level of attention to detail on design and aesthetics at the micro level.

> We moved the center next to the Nine Dragon Lake where there is an amazing view and a coffee shop. It is important how people feel when they receive the service. Then, there are robots in the library hall. They'll come to you as soon as you enter and ask what services

you need … We are also equipping our toilets, where the job fair is held, with combs, hair-spray, and cosmetics so that students can prepare themselves when they come to the fair … Recently, we started considering the [ecological] environment in the design of our services …

4.2.6. Theme 6 – digital platforms

Digital platforms act as the mediary between students and the CCS (micro) as well as between universities and national bodies (macro). While established digital platforms were used across all the studied contexts at the micro and macro levels, at the meso level, digital platforms were developed and utilized on an ad-hoc basis to connect with other universities and local service providers. Digital platforms, which were found to contribute to all the other five themes, were the most versatile theme – for example, for collecting data on quality assurance or promotion of services. The following quotation from a talent team specialist (UK – case 2) depicts how offering CCS through digital platforms provides students with visibility over the service.

> We have now integrated online access to our service into Moodle: our online learning platform. This way, students can see what's on. For example, during the open days, all the network and events are presented in our digital platform, which is connected to Moodle.

4.2.7. Further Interactions among service ecosystem members

The data analysis not only revealed the themes and interactions occurring between receiver and provider at different levels but also identified additional interactions occurring within the ecosystem, and how they influence value co-creation. First, the case studies identified the interaction amongst receivers as a key indicator of service perception. This is in line with Cassidy et al. (2021) who found that, in order to improve students' engagement, university strategies should explicitly acknowledge the influence of peer-to-peer relations on students' experience; otherwise, the engagement and perception of service by users (students) will remain low. The following quotation from an individual career counseling coach (Italy – case 1) shows a negative peer-to-peer influence.

> There's obviously pressures we are seeing from other students as well, especially where groups of students all live together. That kind of talks when, you know "I've applied for four graduate schemes, and I got three offers" can sometimes be detrimental. We run a series of workshops around career planning and getting students to consider their own individual career planning. So, it boils down to getting them to think about the things individually, acknowledging that not just because their friends are doing one thing, it's necessarily the right thing for them too.

Second, all the providers showed a strong tendency to take favorability of service from the perspective of potential receivers (prospect students) into account. This complements theme 2 (student-centered approach) and suggests that CCSs are formed around the expectations of current users and equally around those of potential future users.

> The support and funding from top university managers is quite high on the agenda at the moment in the UK, because headlines, tickets, and things like that are things that prospective students will look at. Career service manager (UK – case 1)

4.3. Cross-case analysis

This section discusses the disparities among the three cultural contexts using contingency theory to respond to the second research question. The service ecosystems were found to be akin to some of the themes identified in section 4.1 on the cultural contexts. Therefore, only the themes for which disparities were found are discussed. The disparities in the CCS structure and function are discussed in addition to the themes.

Building on contingency theory (Drazin & van de Ven, 1985), we adopt a 'matching' type of fit between 'context' (i.e. the cultural context in this study) and 'response variables' (i.e. how the CCS is designed and delivered). Thus, we explore how universities determine a 'fit' between these two. We do not measure the performance of the CCS in the studied cases, as per the type of fit adopted. Rather, we juxtapose the context-response dyads to unearth disparities across the cultural contexts.

4.3.1. CCS structure and function

In all the studied contexts, a shift towards a more interconnected and integrated network of services, including the CCS, was observed. In both UK cases, career service was positioned as a core university service under central administration. However, in both cases from Italy and one of the cases from China, the CCS was a faculty-level service running independently from other faculties. Despite that, the cases in Italy and China mentioned future plans to integrate services centrally at the university level or to establish tighter collaboration with CCSs in other faculties in order to standardize services.

Moreover, in the cases from Italy and China, engagement of academic staff in CCSs was highlighted frequently by respondents (keywords: teacher, professor) whilst, in the UK, no such emphasis was found, and the tasks were defined around CCS-designated staff. In the Lewis model, this can be attributed to being 'people oriented' in multi-active (Italy) and reactive (China) cultures, as opposed to being 'job oriented' in linear-reactive (UK) culture. In the same vein, 'parents' were perceived as active actors in the service ecosystem in Italy and China, whilst this was not found to be the case in the UK. These findings were supported by our secondary searches in other public universities.

Finally, the proportion of words found in transcripts at the macro level in the UK was found to be 37% more than Italy and 22% more than China. More national bodies were mentioned in the analysis of transcripts and in secondary data search for the UK. This implies a greater emphasis in the UK on the norms and regulations in designing and running a CCS. A recent example of moving from voluntary partnerships with non-governmental organizations, such as the Higher Education Funding Council for England, to the more regulated and transparent relations with the Office for Students, found from secondary search, supports this finding.

4.3.2. Quality assurance

In Italy, both cases indicated the importance of having a member of the CCS in the university's quality accreditation team and of establishing connections with board members of the national accreditation system to increase lobbying power. This connects well with the traits of 'seeking out key persons' and 'interweaving the social and professional' in multi-active countries, rather than 'respecting officialdom' and 'separating the social and professional' in linear-active countries.

> … If you look at the Italian Society [Italian name], most of these universities are in the board, the first one is [name of university]. Then, [name of two universities] have the most representative in the board. So, maybe this is one of the elements that we can improve to have more members in the board or even as vice president. Job market specialist (Italy – case 2)

4.3.3. Student-centered approach

Two disparities were found with respect to this theme across the three contexts. First, both cases from China and the secondary data analysis unearthed 'change' as a dominant focus. Keywords, such as 'changes', 'transformation', 'keeping up with change', 'change of philosophy', 'push for change', 'change era', 'trend', and 'reforms', were prevalent. This was relevant to all three levels, from changes made in the CCS to better student experiences (micro), to changing collaboration models with local industries (meso), to changes by the government in policies related to the CCS over recent years. The imperativeness of change was expressed both to boost student experience and to keep up with external changes occurring nationally.

> We are now in the stage of changes in education ideas and concepts. We feel that we have to break some of the original management models and original thinking. We need to be on the students' side, who may now receive a lot of these services outside in the society. So, I feel that school services have to keep up. We can't run based on the traditional models of 10 or 20 years ago. We also need to keep up with the pace of the new generation and raise the perspective of our service. Career guidance lead (China – case 2)

Second, as a more nuanced disparity, universities in Italy were found to have a greater focus on local students in designing their services, as the majority of their Italian students were local, especially undergraduate students. In the UK, however, undergraduate students choose universities based on General Certificate of Secondary Education (GCSE) and Advanced Level (A levels) results, irrespective of university location. The prospects are changing in Italy, with more non-local undergraduate students moving to public universities in Milan, Turin, and Rome.

4.3.4. Industry collaboration

In China, a set of industries are defined by the government as 'key industries', which have a shortage of educated workforce. While the shortage list exists in Italy, and the UK too, no government guidelines specific to CCSs were found in these countries. In China, however, CCSs in all universities are encouraged to train and advise students for key industries. In addition, universities and graduates receive government incentives for working in less-developed regions of the country. As a result, industry collaborations in China are managed at the macro level in relation to government whilst, in Italy and the UK, industry collaborations are mostly formed at the meso level between the university and local industries. In Italy and the UK, industry collaborations are established based on the favorability of companies as future employers from the perspective of students and the relevance of industry to the subjects offered at university.

4.3.5. Promotion of service

Interview transcripts and secondary data from China indicate a higher priority on the visual appearance of services. Keywords, such as 'physical design', 'layout', 'seats',

'toilets', 'coffee shop', and the example of one of the cases in using a robot to greet students indicate the priority afforded visual appearance. In Italy, 'word of mouth', for example, meeting and discussing in public libraries (case 1 – Italy), was seen by both cases as a major tool to promote university services.

5. Discussion of contributions

5.1. Theoretical contributions

First, a unanimous observation across all the cultural contexts was the shift in CCS's role as a university function. The CCS is evolving from a stand-alone peripheral service to a strategic service that is integrated and interwoven with other university services (micro level), which influences and is influenced by local (meso level) and national (macro) stakeholders in higher education. This is congruent with the findings of Vinson et al. (2014) who conducted a 30-year replication study on career services in universities in the USA and found that career services have transitioned from a vocation bureau and job placement center to an inclusive administrative unit with diverse programs.

Second, the field of higher education research is criticized for lacking theory development and application (Hemsley-Brown & Oplatka, 2006; Yorke & Knight, 2007). This study adopts a theoretically eclectic stance, combining and applying theories from organizational management and behavioral science to the higher education setting. Despite being a service-intensive sector, studies in higher education, apart from studies such as Carvalho and Goodyear (2018) and Nie et al. (2019b), have rarely taken a service ecosystem view to analyze how services are designed, created, and delivered through interactions at different levels of the higher education service ecosystem. From another point of view, the literature on service-dominant logic has been criticized for being too abstract and being difficult to observe empirically (Grönroos & Voima, 2013; Storbacka et al., 2016). This study contributes to the service ecosystem literature by empirically testing the service ecosystem and uncovering the underlying constructs in the higher education setting.

Finally, the study contributes in furthering our understanding of the theory of marketing in higher education. It draws attention to the role of the CCS, as an emerging strategic contributor, in service quality and student satisfaction. In line with Goi et al. (2022), the discovered themes within the CCS in this study are de facto the most important areas of focus for value co-creation and enhancing the overall service quality, leading to an improved marketing position for higher education institutes. Moreover, this study adds to the scant body of knowledge on the disparities among different cultural service ecosystems in higher education and the role they play in marketing in higher education. Cultural and national contexts are important determinants of marketing in higher education (Kosmaczewska, 2022; Mahmoud et al., 2020). However, our knowledge is limited on how the service ecosystem perspective can offer a source of competitive advantage for higher education marketing in different countries. This study sheds light on the cross-cultural disparities from a service ecosystem stance and discusses how differences in CCS-related themes can facilitate or hinder marketing for higher education at the macro level.

5.2. Practical contributions

This study provides higher education practitioners with several contributions. First, it translates the service ecosystem perspective from a theoretical concept to a practical understanding through an empirical application. Practitioners can deepen their understanding of the service ecosystem, the stakeholders, and the interactions among them occurring at different levels in the higher education ecosystem to improve the co-creation of services. One advantage the ecosystem perspective offers to practitioners is that, to improve the CCS value proposition to students, not only should CCS-student (provider–receiver) interactions be considered in service planning – which are often measured using student satisfaction surveys – but also interactions with local stakeholders, such as employers and industries (meso level), and with national agencies (macro level). This is in line with the multi-level view of service (Van Wijk et al., 2019) and the need to study national and global service ecosystems (Parida & Jovanovic, 2021). Another benefit of the ecosystem view for practitioners is shedding light on all the stakeholders within the ecosystem. For example, with private CCSs and other unorthodox players entering the higher education ecosystem, students increasingly turn to private career services. Mapping out such actors within the ecosystem allows practitioners to design their services with these emerging competitors in mind.

Second, an overemphasis was observed on university rankings. All the cases heavily devoted resources to university league tables and rankings to design their CCS. One example of such rankings is 'QS Top Universities Ranking', which considers 'graduate employability' as one of the measures in its ranking. This measure includes five sub-measures – namely, employability rate, partnership with employers, employer reputation, alumni outcomes, and employer–student connection (QS Quacquarelli Symonds, 2022a). Whilst these measures are relevant, they cannot be used as a satisfactory indicator of CCS, and they face considerable criticisms (Christie, 2017). One of the pitfalls is the lack of inclusivity and constrained nature of these measures. Over-reliance on such measures to design services would lead to neglect of other important aspects of the service, such as students engaging in social voluntary services on graduation. We argue that adopting a wider ecosystem perspective in higher education service design would provide a more holistic view that acknowledges the interactions students have with the local community (meso level) and in the wider national context (macro level).

Finally, the study carries implications for policy makers at the national (macro) level. All the cases found that government CCS support was insufficient, and they called for greater attention from national agencies. Often, universities find that governments take a simplistic view of the CCS as merely a job placement service. This contradicts the evolving role of the CCS as a strategic university service and calls for further support from governments. This is particularly important in shaping higher education marketing strategies at the national level and increasing the prospects of attracting more international students.

6. Conclusions

This article investigated the CCS across three different cultural contexts using a tri-level scheme (micro, meso, macro) from the service ecosystem to identify the common

themes and underlying constructs in the co-creation of CCSs and to highlight the disparities across the cultural contexts. The findings of the study provide a detailed view of the tri-level scheme within the ecosystem, which facilitates zooming in on the co-creation of the CCS and the underlying themes at each level, and then zooming out to obtain an overarching view of the cultural contexts.

The study is not devoid of limitations. The findings of this study, as in any case study research, are based on an inductive approach and may not be fully generalizable. Several efforts were made to increase the generalizability of results. First, a triangulation of findings was made through a secondary data search in other public universities in the selected countries. Second, we asked follow-up questions in the interviews, such as *'Do the issues you just mentioned happen only at your university or are they relevant to other domestic public universities as well?'*. Careful selection of cases and respondents within cases, all of whom had experience in other universities in their country, lends further credibility to the generalization of the findings. Future research should include a larger number of cases to enhance and confirm the generalizability of results. Finally, the unit of analysis for our case study was the CCS in the higher education institute, and no data were directly collected from other members of the ecosystem, such as governments and local industries. These members can be included in data collection in future research.

Despite the transitioning role of the CCS to a more administrative function in higher education, there is, by and large, a paucity of research on how it influences and is influenced by other stakeholders in the service ecosystem at the micro, meso, and macro levels. Future research is needed to delve into the CCS role and to investigate how it interacts with other stakeholders present in the service ecosystem. Moreover, whilst the service ecosystem literature has investigated pressing issues on innovation (Vargo et al., 2015) and developing service capabilities (Jovanovic et al., 2019) in other contexts, it is unclear how the CCS, and higher education marketing in general, can leverage innovation and develop new capabilities to address the changes in their service ecosystem. Finally, the themes identified in this study can be tested quantitatively in future research with the consequent construct being student satisfaction with the CCS.

Disclosure statement

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References

Akaka, M. A., & Chandler, J. D. (2011). Roles as resources: A social roles perspective of change in value networks. *Marketing Theory*, *11*(3), 243–260. https://doi.org/10.1177/1470593111408172

Akaka, M. A., Vargo, S. L., & Lusch, R. F. (2013). The complexity of context: A service ecosystems approach for international marketing. *Journal of International Marketing*, *21*(4), 1–20. https://doi.org/10.1509/jim.13.0032

Athanasou, J. A., & Van Esbroeck, R. (2008). *International handbook of career guidance*. Springer.

Burns, D. (2011). Facilitating systemic conflict transformation through systemic action research. In D. Körppen, Ropers, N., & Giessmann, H. J. (2011). *The Non-linearity of peace processes: Theory and practice of systemic conflict transformation* (pp. 97–110). Verlag Barbara Budrich.

Burns, T. (1961). Micropolitics: Mechanisms of institutional change. *Administrative Science Quarterly*, *6*(3), 257–281. https://doi.org/10.2307/2390703

Cameron, R., Farivar, F., & Coffey, J. (2019). International graduates host country employment intentions and outcomes: Evidence from two Australian universities. *Journal of Higher Education Policy and Management*, *41*(5), 550-568. https://doi.org/10.1080/1360080X.2019.1646383

Career Industry Council of Australia (CICA). (2022). Retrieved April 2022 from https://cica.org.au/about-us/

Carr-Chellman, A., & Duchastel, P. (2000). The ideal online course. *British Journal of Educational Technology*, *31*(3), 229–241. https://doi.org/10.1111/1467-8535.00154

Carvalho, L., & Goodyear, P. (2018). Design, learning networks and service innovation. *Design Studies*, *55*, 27–53. https://doi.org/10.1016/j.destud.2017.09.003

Cassidy, K. J., Sullivan, M. N., & Radnor, Z. J. (2021). Using insights from (public) services management to improve student engagement in higher education. *Studies in Higher Education*, *46*(6), 1190–1206. https://doi.org/10.1080/03075079.2019.1665010

Cautela, C., Rizzo, F., & Zurlo, F. (2009). Service design logic. An approach based on different service categories. *Presented at IASDR*.

Chandler, J. D., & Vargo, S. L. (2011). Contextualization and value-in-context: How context frames exchange. *Marketing Theory*, *11*(1), 35–49. https://doi.org/10.1177/1470593110393713

Christie, F. (2017). The reporting of university league table employability rankings: A critical review. *Journal of Education and Work*, *30*(4), 403-418. https://doi.org/10.1080/13639080.2016.1224821

Clark, M., Fine, M. B., & Scheuer, C.-L. (2017). Relationship quality in higher education marketing: the role of social media engagement. *Journal of Marketing for Higher Education*, *27*(1), 40-58. https://doi.org/10.1080/08841241.2016.1269036

Conole, G., & Fill, K. (2005). A learning design toolkit to create pedagogically effective learning activities. *Journal of Interactive Media in Education*, *1*(9), 1–16.

Complete University Guide Limited. (2022). *University League Tables 2022*. Retrieved April 2022 from https://www.thecompleteuniversityguide.co.uk/league-tables/rankings

Dey, F., & Cruzvergara, C. Y. (2014). Evolution of career services in higher education. *New Directions for Student Services*, *2014*(148), 5–18. https://doi.org/10.1002/ss.20105

Donaldson, L. (2001). *The contingency theory of organizations*. Sage.

Drazin, R., & van de Ven, A. H. (1985). Alternative forms of fit in Contingency Theory. *Administrative Science Quarterly*, *30*(4), 514-539. https://doi.org/10.2307/2392695

Felix, E. D., Sharkey, J. D., Green, J. G., Furlong, M. J., & Tanigawa, D. (2011). Getting precise and pragmatic about the assessment of bullying: The development of the California bullying victimization scale. *Aggressive Behavior*, *37*(3), 234–247. https://doi.org/10.1002/ab.20389

Foglieni, F., Villari, B., & Maffei, S. (2017). *Designing better services: A strategic approach from design to evaluation*. Springer.

Ford, R. C., & Bowen, D. E. (2008). A service-dominant logic for management education: It's time. *Academy of Management Learning & Education*, *7*(2), 224–243. https://doi.org/10.5465/amle.2008.32712620

Frow, P., McColl-Kennedy, J. R., & Payne, A. (2016). Co-creation practices: Their role in shaping a health care ecosystem. *Industrial Marketing Management*, *56*, 24–39. https://doi.org/10.1016/j.indmarman.2016.03.007

Furbish, D. S., Bailey, R., & Trought, D. (2016). Using participatory action research to study the implementation of Career Development Benchmarks at a New Zealand university. *International Journal for Educational and Vocational Guidance*, *16*, 153–167. https://doi.org/10.1007/s10775-015-9295-5

Gatzanis, S. (2002). Counselling in careers guidance-Migel Jayasinghe; Open University Press, pp. x+ 157, Price@ $16.99. *Behaviour Research and Therapy*, 40(10), 1241. https://doi.org/10.1016/S0005-7967(01)00112-7

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15-31. https://doi.org/10.1177/1094428112452151

Goi, M. T., Kalidas, V., & Yunus, N. (2022). Developing and testing a customer value co-creation model of higher education institutions. *Journal of Marketing for Higher Education*, 1-25. https://doi.org/10.1080/08841241.2022.2076275

Goodyear, P., & Retalis, S. (2010). *Technology-enhanced learning*. Sense Publisher.

Grönroos, C., & Voima, P. (2013). Critical service logic: making sense of value creation and co-creation. *Journal of the Academy of Marketing Science*, 41(2), 133–150. https://link.springer.com/article/10.1007s11747-012-0308-3

Guay, W. R., Kothari, S., & Watts, R. L. (1996). A market-based evaluation of discretionary accrual models. *Journal of Accounting Research*, 34, 83–105. https://doi.org/10.2307/2491427

Hartung, P. J. (2010). Practice and research in career counseling and development—2009. *The Career Development Quarterly*, 59(2), 98–142. https://doi.org/10.1002/j.2161-0045.2010.tb00057.x

Hemsley-Brown, J., & Oplatka, I. (2006). Universities in a competitive global marketplace. *International Journal of Public Sector Management*, 19(4), 316-338. https://doi.org/10.1108/09513550610669176

Herr, E. L. (1997). Career counselling: A process in process. *British Journal of Guidance and Counselling*, 25(1), 81–93. https://doi.org/10.1080/03069889708253722

Herr, E. L. (2013). Trends in the history of vocational guidance. *The Career Development Quarterly*, 61(3), 277–282. https://doi.org/10.1002/j.2161-0045.2013.00056.x

HESA. (2023). Higher Education Student Statistics: UK, 2021/22. 95 Promenade, Cheltenham, GL50 1HZ. https://www.hesa.ac.uk/news/19-01-2023/sb265-higher-education-student-statistics

Jones, P. (2017). Soft service design outside the envelope of healthcare. In E. Tsekleves & R. Cooper (Eds.), *Design for health* (pp. 39–57). Routledge.

Jovanovic, M., Raja, J. Z., Visnjic, I., & Wiengarten, F. (2019). Paths to service capability development for servitization: Examining an internal service ecosystem. *Journal of Business Research*, 104, 472-485. https://doi.org/10.1016/j.jbusres.2019.05.015

Kethüda, Ö. (2022). Evaluating the influence of university ranking on the credibility and perceived differentiation of university brands. *Journal of Marketing for Higher Education*, 1-18. https://doi.org/10.1080/08841241.2022.2059733

Kimbell, L., & Blomberg, J. (2017). The object of service design. In D. Sangiorgi & A. Prendiville (Eds.), *Designing for service: Key issues and new directions* (pp. 20–34). Bloombury Publishing.

Kosmaczewska, J. (2022). Exploring the determinants of choosing an academic destination under a short-term mobility: a cross-cultural comparison of Poland and Portugal. *Journal of Marketing for Higher Education*, 32(1), 138-158. https://doi.org/10.1080/08841241.2020.1834487

Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, 12(1), 1–47. https://doi.org/10.2307/2391211

Lewis, R. D. (2006). *When cultures collide: Leading across cultures*. Nicholas Brealey Publishing.

Litoiu, N., & Oproiu, C. G. (2012). The need of career counselling in universities: A competencies-based approach. *Presented at proceedings of the international conference of scientific paper AFASES*, 24-26 May, Brasov, Romania.

Lusch, R. F., & Vargo, S. L. (2014). *The service-dominant logic of marketing: Dialog, debate, and directions*. Routledge.

Mahmoud, M. A., Oppong, E., Twimasie, D., Husseini, M. M., Kastner, A. N. A., & Oppong, M. (2020). Culture and country choice of international students: evidence from Ghana. *Journal of Marketing for Higher Education*, 30(1), 105-124. https://doi.org/10.1080/08841241.2019.1688444

Martinez-Maldonado, R., Goodyear, P., Carvalho, L., Thompson, K., Hernandez-Leo, D., Dimitriadis, Y., Prieto, L. P., & Wardak, D. (2017). Supporting collaborative design activity in a multi-user digital design ecology. *Computers in Human Behavior*, 71, 327–342. https://doi.org/10.1016/j.chb.2017.01.055

McKenney, S., & Reeves, T. C. (2014). Educational design research. In J. M. Spector, M. D. Merrill, J. Elen, & M. J. Bishop (Eds.), *Handbook of research on educational communications and technology* (pp. 131–140). Springer.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.

Naicker, A. (1994). The psycho-social context of career counselling in South African schools. *South African Journal of Psychology*, 24(1), 27–34. https://doi.org/10.1177/008124639402400104

National Bureau of Statistics of China. (2022). Number of public colleges and universities in China between 2011 and 2021 [Graph]. In Statista. Retrieved September 11, 2023, from https://www.statista.com/statistics/226982/number-of-universities-in-china/

Nelson, H. G., & Stolterman, E. (2012). Service.

Nie, Z., Zurlo, F., Camussi, E., & Annovazzi, C. (2019a). Discussing the potential therapeutic effects on design for psychological well-being: A case of social ecology for occupation service systems. In *Proceedings of Relating Systems Thinking and Design* RSD8 Symposium, October 13–15, 2019, Chicago, USA. http://openresearch.ocadu.ca/id/eprint/3190/

Nie, Z., Zurlo, F., Camussi, E., & Annovazzi, C. (2019b). Service ecosystem design for improving the service sustainability: A case of career counselling services in the Italian higher education institution. *Sustainability*, 11(5), 1427. https://doi.org/10.3390/su11051427

Ostrom, A. L., Parasuraman, A., Bowen, D. E., Patrício, L., & Voss, C. A. (2015). Service research priorities in a rapidly changing context. *Journal of Service Research*, 18(2), 127–159. https://doi.org/10.1177/1094670515576315

Parida, V., & Jovanovic, M. (2021). Servitization in global markets: role alignment in global service networks for advanced service provision. *R&D Management*, 52(3), 577-592. https://onlinelibrary.wiley.com/doi/10.1111radm.12505

QS Quacquarelli Symonds. (2022a). *QS Graduate Employability Rankings 2022*. Retrieved Sep 2023 from https://www.topuniversities.com/university-rankings/employability-rankings/2022

QS Quacquarelli Symonds. (2022b). *QS World University Rankings 2022*. https://www.topuniversities.com/university-rankings/world-university-rankings/2022

Reiser, R. A. (2001). A history of instructional design and technology: Part I: A history of instructional media. *Educational Technology Research and Development*, 49(1), 53–64. https://doi.org/10.1007/BF02504506

Romani-Dias, M., & Carneiro, J. (2020). Internationalization in higher education: faculty tradeoffs under the social exchange theory. *International Journal of Educational Management*, 34(3), 461-476. https://doi.org/10.1108/IJEM-04-2019-0142

Sangiorgi, D. (2009). Building a framework for service design research. *Presented at 8th European academy of design conference*.

Sangiorgi, D., Patrício, L., & Fisk, R. (2017). Designing for interdependence, participation and emergence in complex service systems. In D. Sangiorgi & A. Prendiville (Eds.), *Designing for service: Key issues and new directions* (pp. 49–64). Bloomsbury.

Savickas, M. L. (2012). Life design: A paradigm for career intervention in the 21st century. *Journal of Counseling & Development*, 90(1), 13–19. https://doi.org/10.1111/j.1556-6676.2012.00002.x

Schiersmann, C., Ertelt, B., Katsarov, J., Mulvey, R., Reid, H., & Weber, P. (2012). *NICE handbook*. Heidelberg University.

Shaban, E. A., & Ahmad, M. M. (2021). The Competition between Global Universities for World-Class Ranking. *Journal of Legal, Ethical and Regulatory Issues*, 24(1S), 1-13.

Shertzer, B., & Stone, S. (1981). The school counselor. In B. Shertzer & S. Stone (Eds.), *Fundamentals of guidance* (4th ed., pp. 147–154). Houghton Mifflin.

Shostack, G. L. (1982). How to design a service. *European Journal of Marketing*, 16(1), 49–63. https://doi.org/10.1108/EUM0000000004799

Simiyu, G., Bonuke, R., & Komen, J. (2020). Social media and students' behavioral intentions to enroll in postgraduate studies in Kenya: A moderated mediation model of brand personality and attitude. *Journal of Marketing for Higher Education*, 30(1), 66-86. https://doi.org/10.1080/08841241.2019.1678549

Storbacka, K., Brodie, R. J., Böhmann, T., Maglio, P. P., & Nenonen, S. (2016). Actor engagement as a microfoundation for value co-creation. *Journal of Business Research*, 69(8), 3008-3017. https://doi.org/https://doi.org/10.1016j.jbusres.2016.02.034

Sultan, P., & Wong, H. Y. (2010). Service quality in higher education–a review and research agenda. *International Journal of Quality and Service Sciences, 2*(2), 259–272. https://doi.org/10.1108/17566691011057393.

Svihla, V., & Reeve, R. (2016). *Design as scholarship: Case studies from the learning sciences.* Routledge.

Van Wijk, J., Zietsma, C., Dorado, S., De Bakker, F. G., & Marti, I. (2019). Social innovation: Integrating micro, meso, and macro level insights from institutional theory. *Business & Society, 58*(5), 887-918. https://doi.org/10.1177/0007650318789104

Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science, 44*(1), 5–23. https://doi.org/10.1007/s11747-015-0456-3

Vargo, S. L., & Lusch, R. F. (2017). Service-dominant logic 2025. *International Journal of Research in Marketing, 34*(1), 46–67. https://doi.org/10.1016/j.ijresmar.2016.11.001

Vargo, S. L., Koskela-Huotari, K., & Vink, J. (2020). Service dominant logic: Foundations and applications. In E. Bridges & K. Fowler (Eds.), *The Routledge Handbook of service research insights and ideas* (p. 3-23). New York: Routledge. https://www.routledge.com/The-Routledge-Handbook-of-Service-ResearchInsights-and-Ideas/Bridges-Fowler/p/book/9780815372530

Vargo, S. L., Wieland, H., and Akaka, M. A. (2015). Innovation through institutionalization: A service ecosystems perspective. *Industrial Marketing Management, 44*, 63–72. https://doi.org/10.1016/j.indmarman.2014.10.008

Vinson, B. M., Reardon, R. C., & Bertoch, S. C. (2014). Career services at colleges and universities: A 30-year replication study. *Journal of College Student Development, 55*(2), 203-207. https://doi.org/10.1353/csd.2014.0018

Watts, A. G., & Fretwell, D. H. (2004). *Public policies for career development. Case studies and emerging issues for designing career information and guidance systems in developing and transition economies.* World Bank Education Advisory Service.

Watts, A. G., & Sultana, R. G. (2004). Career guidance policies in 37 countries: Contrasts and common themes. *International Journal for Educational and Vocational Guidance, 4*(2), 105–122. https://doi.org/10.1007/s10775-005-1025-y

Wetter-Edman, K., Sangiorgi, D., Edvardsson, B., Holmlid, S., Grönroos, C., & Mattelmäki, T. (2014). Design for value co-creation: Exploring synergies between design for service and service logic. *Service Science, 6*(2), 106–121. https://doi.org/10.1287/serv.2014.0068

Yin, R. K. (2003). *Case study research: Design and methods.* Sage.

Yorke, M., & Knight, P. (2007). Evidence-informed pedagogy and the enhancement of student employability. *Teaching in Higher Education, 12*(2), 157-170. https://doi.org/10.1080/13562510701191877