

Examining international students' expectations of third-party community engagement as a value co-creation mechanism

David Fleischman, Maria M. Raciti and Meredith Lawley

Purpose of the Study: In higher education, international university students may participate in third-party community engagement experiences (TPCE) as a value co-creation (VCC) mechanism (TPCE^{VCC}), and the university may facilitate these experiences. Drawing from Payne et al.'s (2008) conceptual framework, this study examines how international students' expected cognitions, emotions and behaviors contribute to their expectations of multi-stakeholder VCC experiences. Examining the international student experience in the context of third-party community engagement, allows marketers to better understand the holistic nature of marketing the international student experience and addresses the need for empirically focused VCC research, particularly at the onset of services and in multi-stakeholder scenarios.

Method/Design and Sample: Two models were developed—a full and partially mediated model. Data from $n=310$ international students were collected via a survey administered at the onset of the international student experience. Data were subject to structural equation modelling.

Results: Analysis revealed the strong influence of expected behaviors on expected TPCE^{VCC}. International students expect to behaviorally participate in TPCE^{VCC} and this may be partially facilitated by the university. Findings also suggest opportunities to connect earlier with students' cognitions and emotions to optimize TPCE^{VCC}, supporting better marketing strategies.

Value to Marketing Educators: The study generates theoretical and practical insight for marketers, administrators and faculty to further enhance and develop the international student experience, along with other similar service experiences in higher education, benefiting student, university and community stakeholders.

Keywords: higher education, international students, third-party community engagement, value co-creation, services marketing

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INTRODUCTION

International higher education is a thriving global industry. Recent figures indicate almost five million students were enrolled in tertiary level education outside of their home country (OECD, 2017). This trend is predicted to continue, with eight million students traveling internationally for education by 2025 (OECD, 2017). The strong sector growth has substantial economic impact and intensifies market competition in many countries (Australian Government Department of Education and Training, 2018; Ernst & Young, 2012).

In Australia, the context of this study, international education comprises a 30 billion-dollar industry (Australian Government Department of Education and Training, 2018). It is the largest service export and third largest overall export for Australia, growing by 11 percent from 2016 to 2017 (Australian Government Department of Education and Training, 2018). Given the economic implications of international education to Australia and other global economies, universities face

increasing pressure to attract and retain international students (Hare, 2017). As such, many universities are refreshing superseded marketing strategies with a focus providing holistic student experiences on and off campus.

While the on-campus academic experience is an important attribute in attracting international students, universities are starting to highlight other facets of their service offerings in the form of off-campus, community engagement (i.e. third-party), experiences (Burdett & Crossman, 2012; Woodall, Hiller, & Resnick, 2012; Australian Department of Education and Training, 2017). Evidence suggests third-party, community engagement experiences (e.g. internships, casual work, extra-curricular activities like sport, and volunteering) offer a point of differentiation desired by international students and require the support of university marketers, administrators and faculty (Burdett & Crossman, 2012; Lawson, 2014; Fleischman, Raciti, & Lawley, 2015). Yet, scant empirical work exists in understanding students'

expectations of third-party community engagement (Leask & Carroll, 2011; Gribble, Rahimi, & Blackmore, 2017).

To address this gap, we embed our study in the services marketing area of value co-creation (VCC). Organizations today, including universities, are conscious that consumers' perceived value takes many forms (Chalcraft, Hilton, & Hughes, 2015; Uncles, 2018) and results from consumer participation with service organizations co-creating experiences with various stakeholders (Vargo & Lusch, 2016). Accordingly, third-party community engagement is proposed as a VCC mechanism whereby the university facilitates community-based activities between student consumers and third-party community organizations such as workplaces or organizers of local events. To examine third-party community engagement in the international student experience, we draw from components forming the Payne, Storbacka, and Frow (2008) seminal VCC framework. The Payne et al. (2008) framework provides an empirical basis for understanding international students' (consumers') expectations (cognitions, emotions and behaviors) of third-party community engagement VCC at the start of their experience. Thus, theoretical and practical insight emerges for enabling and supporting third-party community engagement co-created value in multi-stakeholder scenarios, which are an important part of the international student experience.

In this paper, we first review the background literature, develop hypotheses and present our models. Our quantitative study is then detailed. The results of our study are presented prior to discussion of the findings. Limitations and future research directions conclude the paper.

LITERATURE AND HYPOTHESES

The notion of value co-creation

In the last decade, the notion of value co-creation has stimulated continued interest amongst academics and practitioners (Ranjan & Read, 2016). VCC centers on the generation of mutual value among stakeholders (Vargo & Lusch, 2004, 2008). Conceptually, value co-creation is thought to comprise of multiple value tenets; including value-in-use, experiential value, value-in-context; indicating that value co-creation is ingrained *within* service experiences (Sandstrom, Edvarsson, Kristensson, & Magnusson, 2008); and manifests when consumers participate in, or use, the service (Gronroos & Ravald, 2011). It has become clear that the relationships between networks of multiple stakeholders feature in many contemporary organizational settings and understanding and maximizing the interplay between stakeholders is essential for successful economic and non-economic exchange (e.g. Bryson, Sancino, Benington, & Sorensen, 2017; Kazadi, Lievens, & Mahr, 2016; Reypens, Lievens, & Blazevic, 2016). Indeed, multi-stakeholder VCC service scenarios abound. A service organization, such as a university, may facilitate the co-creation of value between students (consumers) and a

third-party community organization (e.g. workplace, support group, sporting association). These service organizations may use different mechanisms to catalyze VCC. In the case of this study, universities may facilitate community-based experiences, aimed at international students, with local entities such as businesses, sporting or volunteer organizations.

Recent VCC publications have provided a refreshed conceptual platform for contemporary service marketing. Despite some empirical advancement, there remains a dearth of empirical work testing the growing multitude of VCC conceptual frameworks (Galvagno & Dalli, 2014; Ranjan & Read, 2016). This study's focus on third-party community engagement in the international student experience, addresses two gaps in the VCC literature—1) understanding VCC early in a service experience, and 2) multi-stakeholder co-created service experiences.

Limited studies focus on VCC at the start of a service experience. Yi and Gong (2013) developed scales that include antecedents to customer VCC behavior. Neghina, Bloemer, van Birgelen, and Caniels (2015, 2017) investigated the influence of various motives on consumer willingness to co-create value and offer some initial propositions of antecedents to VCC, but concede further empirical work is needed. Apart from the latter work, most VCC research focuses on illustrative behaviors *during* VCC and the associated outcomes. Little work investigates consumer processes (i.e. cognition, emotion and behavior) driving VCC at the outset of an experience (Blasco-Arcas, Hernandez-Ortega, & Jimenez-Martinez, 2014).

The lack of research early in a service experience, and focus on behavior and outcomes, may be attributed to existing conceptualizations of VCC. Conceptually, VCC takes various forms, but is most notably connected to value-in-use and experiential value (e.g. Galvagno & Dalli, 2014; Gronroos, 2008). That is, VCC is ingrained *within* service experiences (Sandstrom et al., 2008) and is manifested when consumers participate in, or use, the service with other stakeholders (Gronroos & Ravald, 2011; Tari Kasnakoglu, 2016). These conceptualizations imply a strong association with behavioral influences *during* experiences for VCC outcomes to occur. Although service experiences are traditionally cognitively and emotionally influenced before or when they start (Oliver, 1997), most existing VCC work omits this time point in the experience. Thus, while cognition and emotion feature as important components of the consumer experience in VCC (Payne et al., 2008), it is predominantly regarded as a behavioral endeavor. This results in a deficiency of research understanding expectations of VCC, which could offer foresight towards facilitating and enhancing VCC across a service experience, like international education.

Empirical research in multi-stakeholder service contexts is another opportunity to advance VCC thought and practice (Hillebrand, Driessen, & Koll, 2015; McColl-Kennedy, Cheung, & Ferrier, 2015). The relationships between networks of multiple stakeholders are typical in many contemporary service

settings (e.g. higher education) and facilitating the interplay between stakeholders is essential to VCC (Hillebrand et al., 2015; Pinho, Beirão, Patrício, & Fisk, 2014). However, there remains little work in multi-stakeholder service contexts where the community, for example, along with the service organization (a university) and consumers (international students), is a key stakeholder in VCC. Most extant VCC work focuses on managing co-creation with a single stakeholder (Kazadi et al., 2016).

Indeed, multi-stakeholder contexts such as higher education, compound the complexity of the VCC process as there is a lack of clarity surrounding the expected roles of each stakeholder (Gronroos & Voima, 2013; McColl-Kennedy et al., 2015; Pinho et al., 2014). Despite challenges associated with stakeholder role clarity, some recent work by Kazadi et al. (2016) and Markovic and Bagherzadeh (2018) found innovation is enhanced via multi-stakeholder co-creation. Other work by Pera, Occhiocupo, and Clarke (2016, p. 4043) explores motives and resources for VCC multi-stakeholder ecosystems and highlights the need for more work, stating, "...the academic debate initially concentrated on the role played by consumers in co-creating value, recent consideration has shifted towards a more holistic appreciation of the role played by all actors involved (from suppliers to employees, and society at large) in value creation." Hence, the focus of our study examining expectations of third-party community engagement in the multi-stakeholder higher education experience of international students. We draw from components of Payne et al.'s (2008) seminal framework for managing VCC to guide our empirical examination of international students' expectations

(cognition, emotion and behavior processes) underpinning VCC at the start of a multi-stakeholder service experience.

Overview of the Payne et al. (2008) VCC framework and model development

The Payne et al. (2008, p. 86) seminal framework is noted as one of the few conceptual frameworks to include a complete representation of the value co-creation concept (Alves Fernandes, & Raposo, 2015; Ranjan & Read, 2016). Payne et al. (2008) identify consumer and organization-oriented constructs. The framework illustrates how consumer cognitions, emotions and behaviors influence VCC experiences. Service organizations design and facilitate VCC opportunities via planning, implementation and measurement—mutual organizational and consumer learning results. This allows the organization to facilitate more mutually beneficial co-creation experiences (Payne et al., 2008).

The Payne et al. (2008) framework was an appropriate guide for model development in this study as: a) it centers on the management processes of VCC by a service organization that may require facilitation and conceivably occur at any time; b) it emphasizes the importance of stakeholder relationships; and c) the elements of cognition, emotion and behavior encapsulate all processes present in consumers' experience with stakeholders (i.e. the service organization and community). Drawing from the Payne et al. (2008) framework, two models were developed for this study focusing on expectations of third-party community engagement VCC (TPCE^{VCC}) in a multi-stakeholder service context (Figures 1 and 2).

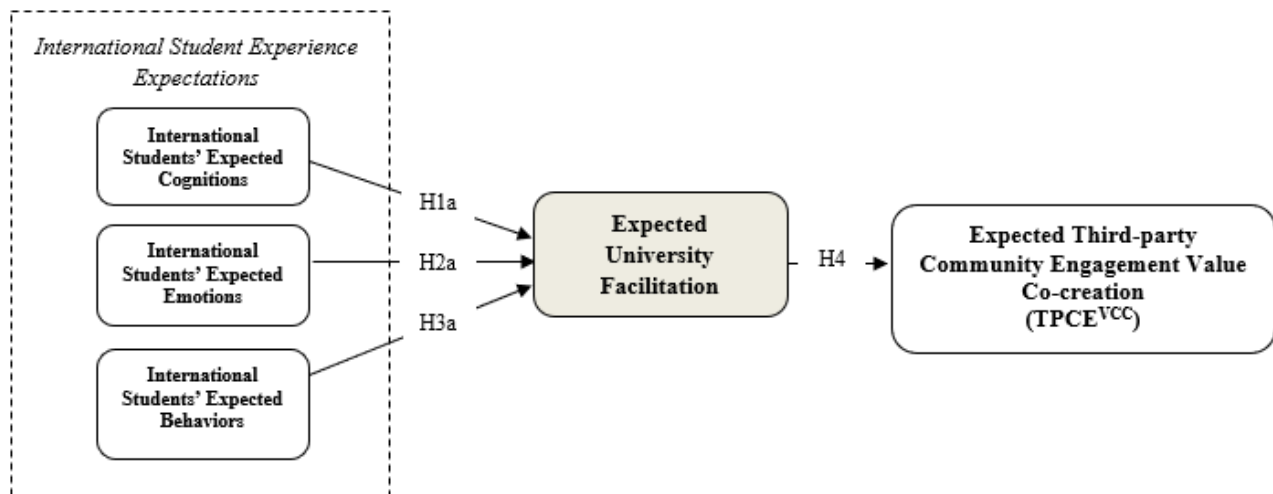


Figure 1. Model A - Fully mediated TPCE^{VCC}

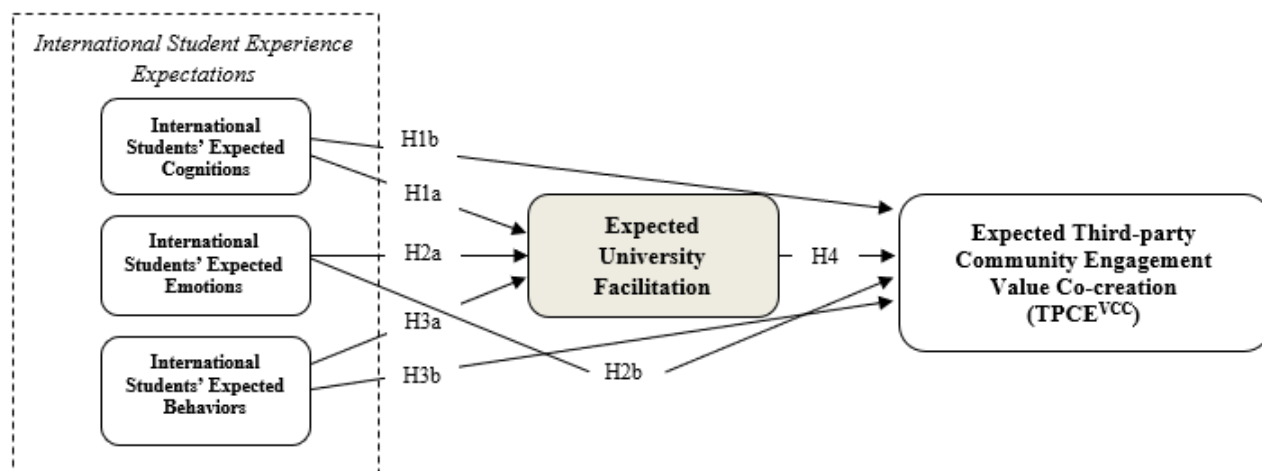


Figure 2. Model B - Partially mediated TPCE^{VCC}

In Model A (Figure 1) and Model B (Figure 2), the independent constructs are international students' (consumers') expected cognitions, emotions and behaviors. Payne et al. (2008) frame these constructs as the consumer relationship experience, contending that cognitions, emotions and behaviors are conduits for VCC and influence how consumers process their experiences. These expectations of consumer cognitions, emotions and behaviors are mediated by expectations of university (service organization) facilitation, which influences how VCC experiences may arise via engaging with third-party community stakeholders. While there is support from the literature for the service organization facilitation role, co-creation can also occur between other stakeholders in service experiences (Vargo & Lusch, 2016). As such, mediated and unmediated hypotheses are proposed.

In Model A (Figure 1), all independent constructs are fully mediated by the expected university facilitation construct, which then influences the dependent construct, expected third-party engagement value co-creation. In Model B (Figure 2), the independent constructs are mediated by expected university facilitation *and* directly influence the dependent construct.

The mechanism to generate co-created value is dependent on the service context (Chandler & Vargo, 2011). Effective VCC mechanisms need to be relevant to the service and its consumers (Saarijarvi, 2012). As this study is set in a university service context, community-based experiences (e.g. volunteering for local organizations, casual work, internships, or participating with a local sports club) with third-parties are the VCC mechanism of interest. Thus, expected third-party engagement value co-creation (TPCE^{VCC}) is the dependent construct. Next, constructs and hypotheses are discussed.

Development of constructs and hypotheses

Consumer processes: International students' expected cognitions

In marketing literature, consumer cognitive processes are defined as the psychological interpretation of a

service, based on perceived knowledge or beliefs concerning the potential benefits of an experience (Oliver, 1980). The Payne et al. (2008) framework for managing VCC acknowledges cognitive processes can be complex or simple (Fishbein & Azjen, 1975). Consumer processes are best viewed holistically (Helkkula, Kelleher, & Philstrom, 2012), as they are subjective, context-specific (Brady & Robertson, 2001; Chandler & Vargo, 2011) and influence consumer expectations of a service (Oliver, 1997). For example, consumers' cognitive processes are heightened when they perceive high levels of value associated with a service (Patterson, 1993).

Service organizations can influence consumers' cognitive processes by suggesting and reinforcing positive benefits consumers garner from a particular VCC mechanism. For example, in the context of this study, where value co-creation involves connecting international students beyond the university, such as with community groups, the university may promote the positive benefit of becoming a part of a community—this in turn generates positive cognition expectations among international students (e.g. Rosenbaum, Ward, Walker, & Ostrom, 2007). When there are heightened levels of positive consumer cognitions (i.e. positive thoughts) towards a service experience at the start, there is greater likelihood the consumer will participate in a VCC opportunity facilitated by the service organization (Payne et al., 2008). Accordingly, we hypothesize:

H1a: International students' expected cognitions positively influence and are mediated by expected university facilitation in expected third-party community engagement value co-creation experiences.

H1b: International students' expected cognitions positively influence expected third-party community engagement value co-creation experiences.

Consumer processes: International students' expected emotions

Emotions are multi-faceted and influenced by consumers' service encounters (Richins, 1997). Emotions are subjective, making them difficult to define and apply in different contexts (J.Y. Lee, C. Lee, S. Lee, & Babin, 2008). The type of service, point in time of consumption and the duration of a service experience influence the variety of emotions consumers undergo (Mattila & Enz, 2002). For example, at the start of an experience like studying overseas, expected consumer emotions of a service experience may be heightened (Koenig-Lewis & Palmer, 2014). Research has supported the importance of understanding and managing emotions before service experiences and that expected consumer emotions influence the degree to which service encounter emotions are positive (Price, Arnould, & Deibler, 1995; Bigne, Mattila, & Andreu, 2008).

It is also important for service organizations, like universities, to consider the context in which experiences occur and how that influences consumer emotion (Liljander & Strandvik, 1997). For example, when emotion is positively heightened in a service context, consumers can become attached to the setting (third-place) and other consumers where an experience occurs (Rosenbaum et al., 2007). International students would likely experience this phenomenon in the communities they live in while studying overseas. That is, emotions in a service context can connect people, generating a sense of community and feelings of belonging to that community (Rosenbaum et al., 2007). Belonging to a community is a valuable part of the international student experience and is central to the dependent construct of this study, being third-party community engagement value co-creation.

As an individual's emotions and contextual experiences vary at different points in time, which would likely be the case for international students, service organizations like universities must constantly revise their role in facilitating positive consumer emotions (Price et al., 1995; Bigne et al., 2008), including at the starting point (Koenig-Lewis & Palmer, 2014). Following Beckman (1989), Payne et al. (2008, p. 87) conceptualize emotion as a holistic state that includes "feelings, moods and affect-based personality characteristics". This study is concerned with expected emotions and offers the following associated hypotheses:

H2a: International students' expected emotions positively influence and are mediated by expected university facilitation in expected third-party community engagement value co-creation experiences.

H2b: International students' expected emotions positively influence expected third-party community engagement value co-creation experiences.

Consumer processes: International students' expected behaviors

Services research into behavior tends to focus on the processes of intended rather than actual behavior (Holbrook & Hirschman, 1982; Payne et al., 2008). At the start of an experience, international student consumers have expectations of behaviors they may undertake. For service organizations (universities), understanding these expected behaviors is important as they underpin overall consumer expectations and ultimately influence their perceived satisfaction with the service (Natti, Pekkarinen, Hertikka, & Holappa, 2014).

Expected behaviors vary across service contexts (Mittal, Kumar, & Tsiros, 1999). This study's multi-stakeholder VCC scenario involves international students studying at a university overseas and participating in activities in the community (third-party engagement) such as attending events, working for local businesses and volunteering. In such multi-stakeholder scenarios, VCC may be a mixture of service organization facilitated behaviors (i.e. international students expecting to rely on the university to offer opportunities which they will respond to); and self-generated behaviors (i.e. international students expecting to demonstrate personal agency and seeking opportunities with a third-party without university facilitation). Accordingly, expected behaviors are viewed as consumers' anticipation of the behaviors involved within potential third-party engagement experiences, some facilitated by the service organization and some not. The associated hypotheses are:

H3a: International students' expected behaviors positively influence and are mediated by expected university facilitation in expected third-party community engagement value co-creation experiences.

H3b: International students' expected behaviors positively influence expected third-party engagement community value co-creation experiences.

International students' expectations of universities as value co-creation facilitators

The role of the service organization (university) as a facilitator between stakeholders is common throughout the VCC literature. Gronroos and Ravald (2009, p. 13) posit that "value facilitation" is where firms facilitate VCC by acting as a conduit for resource integration with consumers. For example, Thuy (2011) suggests airlines are obliged to facilitate VCC via platforms that make processes (e.g. flight check-in) more convenient for consumers. In hospitality, Hsiao, Lee and Chen (2015) contend the facilitation role of the organization is central to and mediates VCC via employee interaction with consumers. Kao, Yang, Wu and Chen (2016) opine the benefits of service firms facilitating VCC across consumption via social media. When service organizations, like universities, present opportunities (value propositions), this is an important catalyst for the

realization of VCC (Vargo & Lusch, 2008). It is central to initiating and developing VCC between consumers (e.g. international students) and other third-party stakeholders (Gronroos & Ravald, 2011; Natti et al., 2014). Although service organization facilitation in VCC is supported, there are few empirical studies exploring consumer expectations of service organization facilitation at the start of an experience, in multi-stakeholder contexts.

In a multi-stakeholder context, Natti et al. (2014) offer some initial evidence of the importance of service organization facilitation in the co-creation of value. Natti et al. (2014, p. 981) posit service organizations should match consumer processes with service processes that “elucidate” the value proposition and “co-market” it with other third-party stakeholders to help develop the VCC opportunities consumers desire. Their focus on developing value propositions that match consumer and service processes, and communicate co-creation opportunities, is indicative of understanding consumer expectations of service organization facilitation at the start of an experience. Natti et al.’s (2014) findings reflect the Payne et al. (2008) framework. If a service organization wants to improve its competitive standing, it may strategically facilitate consumer access to resources or experiences with a third-party stakeholder. Indeed, consumers may expect third-party experiences to be offered due to the nature of the service being consumed. Such is the case for higher education services.

In the context of this study, universities act as mediators or intermediaries, connecting students to the wider community (e.g. Onyx, 2008; Fehren, 2010). While students may self-generate links with the local community, universities often facilitate links between students and community-based activities with third-party stakeholders via a mechanism commonly referred to as *community engagement* (Onyx, 2008). Some groups of students, such as international students, may need and expect university-facilitated third-party community engagement. Such service organization facilitation can help catalyze co-created value experiences between multiple stakeholders (Natti et al., 2014). In this study, as illustrated in Figures 1 and 2, university facilitation involves how international students expect the university to foster the resources and relationships amongst stakeholders so TPCE^{VCC} opportunities may occur. It is therefore hypothesized:

H4: Expected university facilitation positively influences expected third-party community engagement value co-creation.

Expected third-party community engagement co-created value

The dependent construct is expected third-party community engagement value co-creation (VCC^{TPCE}) (Figures 1 and 2). The context in which the consumer experience occurs is central to understanding how VCC is realized (Akaka, Vargo, & Schau, 2015). Value-in-context provides meaning and frames stakeholders’ potential co-creation experiences (Chandler & Vargo,

2011). Context is dynamic and subjective regarding individual consumers’ experiences (Helkkula et al., 2012). In this study, value may be co-created because of the expected third-party experiences international students may have with the local community context (e.g. attending a local event or undertaking an internship with a local organization), which the university may help facilitate.

VCC mechanisms are the various methods organizations use to facilitate the mutual integration of stakeholder resources (Saarijarvi, 2012; Zhang & Chen, 2008). Payne et al. (2008) include mechanisms in their broad description of the various processes stakeholders may be involved with that support VCC. Established mechanisms include processes and opportunities for stakeholders to co-produce, co-design and co-develop experiences (Saarijarvi, 2012). Importantly, the mechanism must be relevant to the context in which the co-creation experience occurs. In this study, third-party community engagement is the mechanism often facilitated by universities to encourage and provide community-based co-creation experiences for international students (Fleischman et al., 2015).

As a VCC mechanism, third-party community engagement can take many forms in that international students may seek or see value in various types of community-based experiences. In the higher education context of this study, third-party community engagement value co-creation takes the form of expected community experiences where mutually beneficial resources (knowledge, skills and relationships) are potentially developed and exchanged between international students, the university and third-party community stakeholders (e.g. employers, local organizations and events). Notably, our view incorporates two important themes also prominent in the higher education community engagement literature: (1) mutual stakeholder benefit, and (2) anticipated experiences where the exchange of resources in the form of knowledge, skills and relationships occur (Allison & Eversole, 2008; McNall Barnes-Najor, Doberneck, & Fitzgerald, 2015). Hence, rather than viewing third-party community engagement and value co-creation as discrete, this study recognizes third-party community engagement **as** the mechanism driving value co-creation (TPCE^{VCC}).

Understanding these expectations of third-party community engagement at the start of an experience, allows stakeholders (students, universities and the community) to better communicate with each other and learn about opportunities to optimize and customize co-creation for all. Universities and third-party community stakeholders are then able to better match their resources with international students’ desires and resources, to co-develop and co-design enhanced VCC opportunities. As a result, mutual benefit occurs earlier in the consumption process (that may not have otherwise) with international students receiving a better overall experience. The university also improves its competitive advantage due to a better understanding of how to develop and facilitate VCC opportunities earlier

in the experience. Communities stand to gain in terms of increased intellectual, social and cultural capacity (Allison & Eversole, 2008).

THE STUDY

Research design

Quantitative data were collected from a population of $n = 397$ international students. Following the guidelines of Hair, Anderson, Tatham, and Black (2010), data of the total population were captured via self-administered questionnaires from $n = 310$ respondents (78%) at the start of their international student experience. The respondent demographic profile was representative of the university's international statistics regarding gender, citizenship, English as a first language, degree program and Faculty.

Measures

Despite some existing scale items from other studies, they could not be adapted to this study without risking face validity, making scale development necessary. A six-step approach following Churchill (1979) and Rossiter (2002) guidelines was undertaken, including:

1. An initial exploratory qualitative study (see Fleischman et al., 2015) involving in-depth interviews and focus groups obtained data from international students, university staff and community members at a regional Australian university. Four university staff and five community-member respondents ($n = 9$) were purposively recruited and interviewed. Twenty-two international students, representative of the university's population, were recruited via convenience sampling for three focus groups ($n = 5, 9, 8$). Analysis from this step confirmed the literature review in relation to how third-party community engagement could be used as a mechanism for VCC in the international student experience; and provided support for the model conceptualization and hypotheses.
2. A large number of items were then developed, refined and reduced, after consultation amongst the researchers, on the basis of support in the literature and alignment with the qualitative study (Churchill, 1979).
3. Six external (from other universities in the country of study) discipline and/or quantitative methodology "expert raters" (Rossiter, 2002, p. 310) accepted an invitation to review the draft questionnaire. Panel members assessed the items' conceptual fit and appropriateness, commented on item terminology and comprehension, and provided feedback on format and presentation. The feedback enhanced item content and face validity, construct conceptualization, uni-dimensionality, and questionnaire format.
4. "Group rating" (Rossiter, 2002, p. 310) via convenience sampling was used to recruit a focus group from the sample population ($n = 9$)

to assess the draft questionnaire, particularly in terms of face and content validity and usability.

5. Another round of group rating via convenience sampling of the population was used to conduct depth interviews with $n = 10$ respondents (given the same instructions as the focus group) to test the refinements from the focus group.
6. Two discipline and/or quantitative methodology expert raters evaluated a pilot instrument and suggested minor revisions. Subsequently, using convenience sampling, $n = 47$ respondents completed and provided feedback on the instrument. The pilot data were analyzed via exploratory factor analysis and reliability tests. Item loadings, Bartlett's Test of Sphericity, Kaiser-Maeyer-Okin (KMO) and Cronbach's Reliability were examined, with the constructs meeting thresholds suggested by Hair et al. (2010), and some final minor revisions were made. Seven-point Likert scales were used (see Appendix).

ANALYSIS AND RESULTS

Analysis of the measures

Construct measures in service experiences are commonly considered factors (items) reflecting something unobserved (a latent construct) (Fornell & Bookstein, 1982). Exploratory factor analysis (EFA) was used as an initial assessment of construct uni-dimensionality. Confirmatory factor analysis (CFA) using AMOS for structural equation modelling (SEM) followed.

CFA involved identification estimation and evaluation (Anderson & Gerbing, 1988). For model estimation, the latent construct measurement models were tested individually prior to testing the full structural model, confirming the items were good indicators of the latent constructs (Bagozzi & Yi, 2012). Parceling was utilized by calculating the average sum of the aggregate item indicators for each latent sub-factor to assess CFA reliability and validity in the models (Bandalos & Finely, 2001). The sum represents the totality of the indicators in the full structural model by condensing the number of measurement parameters and reducing item error volatility, producing a more stable model (Little, Cunningham, Shahar, & Widaman, 2002). Parceling is beneficial when models are complex (e.g. a large number of item indicators, non-normality) (Little et al., 2002), as in this study.

CFA reliability and validity analysis included: standardized regression weights (parameter estimates); composite reliability (CR); squared multiple correlations (R^2); and average variance extracted (AVE). Results indicated satisfactory figures for reliability ($R^2 = 0.50-0.84$), with exceptions for certain items reporting marginal, but adequate, ($R^2 = 0.30-0.50$) reliability (Holmes-Smith, 2011). One expected cognitions item registered less than desirable reliability ($R^2 = 0.25$), but was retained due to its theoretical alignment and acceptable indices for other tests (Anderson & Gerbing, 1988).

Using the Fornell and Larcker (1981) average variance extracted (AVE) method, discriminant validity was confirmed. Convergent validity was established via CFA of the parameter estimates (standardized regression weights ranged from 0.50-0.91 for all constructs), and the fit indices, demonstrating uniform

measurement scales with the latent constructs they support (Bagozzi & Yi, 2012).

SEM was used to examine the measurement and structural models. Nine tests were utilized as no individual fit statistic test demonstrates conclusive model fit. Table 1 provides the goodness-of-fit results for the measurement and structural models.

Table 1. SEM fit results for the measurement models

Measurement Model Goodness-of-Fit Indices										
Measurement Construct	χ^2	<i>p</i>	χ^2/df or <i>CMIN/df</i>	RMR	GFI	TLI	CFI	RMSEA		
<i>Int Students' Expected Cognitions</i>	43	0.00	5.39	0.13	0.96	0.92	0.96	0.12		
<i>Int Students' Expected Emotions</i>	92.42	0.00	2.89	0.09	0.95	0.95	0.97	0.08		
<i>Int Students' Expected Behaviours</i>	119.99	0.00	2.93	0.08	0.93	0.94	0.96	0.08		
<i>Expected University Facilitation</i>	3.3	0.19	1.66	0.02	0.99	0.99	0.99	0.05		
<i>Expected TPCE^{vcc}</i>	248.6	0.00	3.0	0.05	0.90	0.94	0.95	0.08		
Structural Model Goodness-of-Fit Indices										
Model versions	χ^2	<i>p</i>	χ^2/df or <i>CMIN/df</i>	RMR	GFI	TLI	CFI	RMSEA	AIC	BIC
<i>Model A Full meditation (Figure 1)</i>	387.78	0.00	3.99	0.09	0.85	0.83	0.86	0.09	465.78	611.5
<i>Model B Partial mediation (Figure 2)</i>	349.79	0.00	3.60	0.09	0.87	0.85	0.88	0.09	427.79	573.52

Table 1 reports the statistically significant measurement models results. Apart from the χ^2 values and the expected cognitions construct displaying slightly less than desirable results for the χ^2/df ratio, RMR and RMSEA, most indices indicate acceptable fit. As characteristic of this study, $\chi^2 p$ -values < 0.05 are common with multivariate non-normal data and sample sizes >200 (Bollen, 1989). Confirmation for the fit of the structural models is shown in Table 1, with the best fitting results highlighted. The fit indices are acceptable with the exception of the χ^2 values. The partially mediated Model B (Figure 2) reports a better fit based on the AIC and BIC analyses (Table 1), which penalize

models with additional pathways (Browne & Cudeck, 1993).

Common method bias, using the Harman single factor test (P.M. Podsakoff, MacKenzie, Lee, & N.P. Podsakoff, 2003), was tested and unlikely, with the single factor results accounting for 29.3% of the variance. Multi-collinearity (tolerance values and VIF scores) were examined. Tolerance values were between 0.30-1.0 per cent and VIF scores < 3.0, indicating no multi-collinearity (Hair et al., 2010). Both model versions were informative of the phenomena researched, with Model B (Figure 2) exhibiting better overall fit.

Results

The standardized regression weights (β) for the structural model paths indicate all hypotheses were

acceptable and exhibited positive influences in both models (Table 2). However, the strength of influence varied.

Table 2. Structural model path association results

Model versions	Hypotheses	Significant Association ($p < 0.01$)	Association Type	*Path Strength & Beta Value (β)
Model A Full mediation (Figure 1)	H1a – Int Students' Expected Cognitions → Expected University Facilitation	Yes	Positive	Moderate ($\beta = 0.43$)
	H2a – Int Students' Expected Emotions → Expected University Facilitation	Yes	Positive	Mild ($\beta = 0.10$)
	H3a – Int Students' Expected Behaviours → Expected University Facilitation	Yes	Positive	Very Strong ($\beta = 1.12$)
	H4 – Int Students' Expected University Facilitation → Expected TPCE ^{VCC}	Yes	Positive	Strong ($\beta = 0.71$)
Model B Partial mediation (Figure 2)	H1a – Int Students' Expected Cognitions → Expected University Facilitation	Yes	Positive	Mild ($\beta = 0.11$)
	H1b – Int Students' Expected Cognitions → Expected TPCE ^{VCC}	Yes	Positive	Weak ($\beta = 0.05$)
	H2a – Int Students' Expected Emotions → Expected University Facilitation	Yes	Positive	Mild ($\beta = 0.19$)
	H2b – Int Students' Expected Emotions → Expected TPCE ^{VCC}	Yes	Positive	Mild ($\beta = 0.10$)
	H3a – Int Students' Expected Behaviours → Expected University Facilitation	Yes	Positive	Strong ($\beta = 0.63$)
	H3b – Int Students' Expected Behaviours → Expected TPCE ^{VCC}	Yes	Positive	Moderate ($\beta = 0.49$)
H4 – Expected University Facilitation → Expected TPCE ^{VCC}	Yes	Positive	Strong ($\beta = 0.50$)	

*Path strength nomenclature is based on guidelines from Holmes-Smith (2011).

Results in Table 2 support hypothesis *H1a* and indicate international students' expected cognitions had a significant, moderate impact on expected university facilitation in Model A ($\beta = 0.43$) and a mild impact in Model B ($\beta = 0.11$). International students' expected emotions displayed mild but significant influence on expected university facilitation in Model A ($\beta = 0.10$) and Model B ($\beta = 0.19$), providing support for *H2a*. International students' expected behaviors had a significant and very strong impact on expected university facilitation in Model A ($\beta = 1.12$) and a strong influence in Model B ($\beta = 0.63$), supporting *H3a*. Results for the effect of expected university facilitation on expected TPCE^{VCC} were significant and strong in both models, supporting *H4*—with Model A ($\beta = 0.71$) reporting a stronger effect than Model B ($\beta = 0.50$). Results of the direct effects of the independent constructs on the dependent construct were also assessed in Model B. The influence of international

students' expected cognitions on TPCE^{VCC} was weak ($\beta = 0.05$) but supported *H1b*. International students' expected emotions were found to have a mild but significant influence on expected TPCE^{VCC} ($\beta = 0.10$), offering support for *H2b*. A moderately strong influence ($\beta = 0.49$) was exhibited by international students' expected behaviors on TPCE^{VCC}, confirming *H3b*. Baron and Kenny's (1986) mediation test was utilized for *H4*. After running a series of three regression tests between the constructs (Baron & Kenny, 1986), significant ($p < 0.01$) but mild (0.20-0.30) (Holmes-Smith, 2011) results were evident, demonstrating acceptance of *H4*. That is, expected university facilitation partially mediates the relationship between the independent and dependent constructs. Direct, indirect and total effects were also examined and supported the mediation test outcome. The partially mediated Model B (Figure 2) is the best fit given the collective SEM results.

DISCUSSION

Findings suggest international students' expectations of third-party community engagement value co-creation are behaviorally driven and partly mediated by the university at the beginning of a service experience. Particularly, when international students' expected behaviors are fully mediated by expected university facilitation (Figure 1), its effect is strongest. In the partially mediated Model B (Figure 2), the mediated international students' expected behaviors path also displayed stronger influence than its direct path to third-party community engagement co-created value. This finding offers empirical support of international students' participation and interaction (behavioral doing) as the catalyst for VCC with third-party community stakeholders (e.g. Tari Kasnakoglu, 2016; Yi & Gong, 2013). Hence, at the start of a multi-stakeholder scenario, international students' expectations of co-created value are driven by their expectation of what they will be doing with community stakeholders and will likely require some degree of facilitation by the university. We suggest this would also be the case in other similar service industries (e.g. tourism, community-based healthcare).

Compared with expected behaviors, international students' expected cognitions and emotions had much less impact on co-created value. International students' expected cognitions had a moderate impact when mediated by expected university facilitation (Figure 1) and weak influence when directly associated with expected third-party community engagement co-created value (Figure 2). International students' expected emotions displayed mild mediated and direct path influences in both models. These findings suggest the VCC concept may lack theoretical connection, as previously conceptualized by Payne et al. (2008) regarding consumers in general, to international students' thoughts and feelings at the start of a multi-stakeholder service scenarios involving third-party community engagement. Further, the findings also support the theoretical notion of the university playing the role of facilitator in community engagement—often acting as conduit between students and community stakeholders (AUCEA, 2008; Onyx, 2008; Fehren, 2010)

Insights and opportunities regarding the need for universities (and service organizations in general) to better understand how expected international students' cognitions and emotions influence VCC early in experiences also emerge. In understanding these findings, universities can initiate and facilitate better multi-stakeholder VCC opportunities, given international students' (consumers') cognitions and emotions typically begin early, before and within service experiences (Oliver, 1997). Developing marketing strategies that facilitate positive international student cognitions and emotions early in their study experience is warranted. This would augment the strong behavioral component of VCC and help generate more proactive participation in multi-stakeholder service experiences (e.g. internships, participating in local sports club) within

the local community. If universities are aware of international students' expected cognitions and emotions towards third-party community engagement experiences at the start, the resources needed for initiating and facilitating multi-stakeholder VCC become clearer. To enhance this clarity, universities may use digital platforms (e.g. applications, webpages, Instagram, Facebook) designed to convey and communicate opportunities for international students to engage with third-party stakeholders *before* they arrive on-campus and at the start of their experience. For example, this could take the form of a webpage posting internships or casual work opportunities international students can view online before arriving on campus. Or, an Instagram page focused on sports clubs at the university and in the community that international students are invited to be involved with.

Marketing communication could also suggest how students can engage with the community before and shortly after they arrive to their new community if they are interested. This information may be collected via pre-arrival survey. Tailored digital content could then be created in the form of short videos starring current international students providing advice to incoming international students on various types of community engagement experiences sought. Clips could include information on purchasing mobile phone plans, public travel, establishing a bank account, how to apply for casual jobs or an internship. This content may then be featured in orientation sessions and certain courses with large international enrolments. This would help activate and encourage positive expectations in relation to cognitions and emotions, along with behaviors, toward third-party engagement in an unfamiliar setting, *earlier* in the international student experience. Understanding what drives international students' expectations of co-created value in multi-stakeholder contexts can help university teaching faculty embed community engagement experiences and opportunities in their courses; and provides university marketers and administrators key insights for facilitating and fostering better VCC opportunities from the start.

Thus, to create and develop an enriching service experience, universities should understand the facilitative nature of their role in multi-stakeholder VCC. This finding adds support to the importance of service organization facilitation of VCC in multi-stakeholder scenarios (e.g. Natti et al., 2014; Gronroos & Ravald, 2009), and particularly in the context of higher education (Fehren, 2010; Onyx, 2008). From a strategic viewpoint, facilitation and management of consumers' expected VCC with third-party stakeholders is an important consideration for university marketers and administrators. Setting realistic expectations helps avoid dissatisfaction (Oliver, 1980). Hence, the communication strategies suggested earlier help set realistic expectations from the start and offer a clear idea of what to expect in the new community international students will be studying and living in. In turn, this contributes to building a sense of comfort and helps international students feel welcome and safe, which is a critical aspect of in their experience (Gribble

et al., 2017; Mills, 2018; Marginson, Nyland, Sawir, & Forbes-Mewett, 2010). University marketers, administrators and faculty are best to focus on promoting *potential* VCC opportunities that may exist with international students and community stakeholders and be wary of promising unrealistic (e.g. guaranteeing casual work or securing an internship), unsafe or poorly resourced experiences.

Notably, not all multi-stakeholder consumer experiences require facilitation at the pre-consumption time point. This study demonstrates international students' expectations of VCC also occur directly (bypassing the university) with third-party community stakeholders, supporting the view that VCC can be both direct and indirect (Vargo & Lusch, 2016). It is important that service organizations like universities consider practicalities such as the VCC mechanism (Saarijavari, 2012) (e.g. third-party community engagement), context (Akaka et al., 2015) (e.g. higher education) and time in the experience, when determining the degree of facilitation required in multi-stakeholder service scenarios.

CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

While conceptual advancements on VCC continue, empirical investigations are somewhat limited. Specifically, in regard to various times across the service experience and in multi-stakeholder contexts (Blasco-Arcas et al., 2014; Pera et al., 2016). Accordingly, the aim of this study was to empirically examine international students' expected cognitions, emotions and behaviors at the onset of a multi-stakeholder, where the university acts as a facilitator for third-party VCC. To achieve the aim, two models guided by the Payne et al. (2008) seminal framework for managing VCC, were developed. It was found that in the international student experience, universities facilitate experiences with third-party community stakeholders, in the form of community engagement, as a VCC mechanism. As service providers, the findings illustrate the importance for university faculty, marketers and administrators to consider in marketing

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and supporting a more holistic international student experience, incorporating on-campus **and** off-campus community-based engagement. As such, this study contributes empirical stock to understanding (1) consumers' (international students') VCC expectations at the start of an experience, (2) service organization (university) facilitation of VCC mechanisms in multi-stakeholder contexts where experiences occur with third parties, and (3) community engagement in the international student experience. Given the developing empirical standing of VCC, the findings offer theoretical and practical contributions to understanding not only the context of this study, but also to other similar VCC multi-stakeholder contexts.

Like all research, this study has limitations. The study could be extended to similar services in which the community is a key stakeholder (e.g. community sporting events, tourism or government community health initiatives). This study was guided by the Payne et al. (2008) framework and focused on understanding consumers' expectations of third-party VCC in a multi-stakeholder service experience. Future research, unpacking the community and service organization viewpoints and empirically testing other components of the Payne et al. (2008) framework, along with analyzing the effect of descriptive variables (e.g. gender, nationality) on the construct relationships, is encouraged. Our study was cross-sectional making a longitudinal comparison a logical advancement. This advancement could seek to compare international students' actual third-party community engagement experiences to their initial expectations at the onset of their experience. Other research may also test the effectiveness of the marketing initiatives suggested. The quantitative data were derived from a self-administered questionnaire and reported results from the perspective of one stakeholder. Future research capturing quantitative data for the same constructs from other stakeholders (e.g. community members) is warranted.

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Appendix - Scales

Expected Cognitions ($\alpha = 0.83$)

Please reflect on your thoughts at the start of arriving in the local community.

General Expectations ($\alpha = 0.79$)

- I thought a lot about coming
- I was looking forward to engaging off campus
- I had high expectations of engaging off campus

Community Acceptance ($\alpha = 0.77$)

- I thought I would fit in well with the community
- I thought I would identify with the community
- I thought about engaging in the community

Expected Emotions ($\alpha = 0.71$)

Please reflect on your feelings at the start of arriving in the local community.

Negative Emotions ($\alpha = 0.89$)

- I expected to feel worried about engaging with the community
- I expected to feel isolated from the community
- I expected to feel frustrated about engaging with the community
- I expected to feel uncertain about engaging with the community

Positive Emotions ($\alpha = 0.85$)

- I expected to feel excited about engaging with the community
- I expected to feel happy about engaging with the community
- I expected to feel optimistic about engaging with the community

Sense of Membership ($\alpha = 0.86$)

- I expected to feel a sense of connection with the community
- I expected to feel appreciated by the community
- I expected to feel a sense of belonging when engaging professionally with the community
- I expected to feel a sense of belonging when engaging socially with the community

Expected Behaviors ($\alpha = 0.84$)

Please reflect on your intentions at the start of arriving in the local community.

Social Development ($\alpha = 0.82$)

- I expected to form friendships within the community
- I expected to engage with local Australians
- I expected to seek opportunities to socially engage with the community
- I expected to seek opportunities to grow as person

Professional Development ($\alpha = 0.74$)

- I expected to seek volunteer opportunities with the community (e.g. Red Cross, Rotary, Surf Life Savers)
- I expected to seek opportunities to professionally engage with the community
- I expected to seek opportunities that would enhance my future career outlook by engaging with the community

Community Dependence ($\alpha = 0.92$)

- I expected to rely on the community to create engagement experiences overall
- I expected to rely on the community to assist me with creating engagement experiences
- I expected to rely on the community to suggest how I can engage in a meaningful way with them
- I expected to rely on the community to approach me about engagement opportunities

Expected University Facilitation ($\alpha = 0.80$)

Please reflect on your anticipations of the University at the start of arriving in the local community.

- I expected the university to promote on-campus activities that lead to off-campus engagement
- I expected the university to assist me with community engagement opportunities
- I expected the university to educate the community about international students
- I expected the university to work with me to create community engagement experiences

Expected Third-Party Community Engagement Value Co-creation ($\alpha = 0.94$)

Please reflect on the value of community engagement at the start of arriving in the Sunshine Coast community.

International Student Value ($\alpha = 0.88$)

- I expected my community engagement interactions to enhance my student experience
- I expected the knowledge I will gain through community engagement to be valuable
- I expected the skills I will gain through community engagement to be valuable
- I expected community engagement interactions to make me a better person overall
- I expected the relationships I will form through community engagement to be valuable

Institution Value ($\alpha = 0.90$)

- I expected international student community engagement to improve the value of the university's reputation
- I expected international student community engagement to create a valuable competitive advantage for the university
- I expected international student community engagement to make the university a better institution overall

Community Value ($\alpha = 0.90$)

- I expected the cultural understanding that interactions with international students can create to be of value to the community
- I expected international student community engagement to make the community better overall
- I expected the knowledge international students can bring to be of value to the community

Overall Value ($\alpha = 0.88$)

- Overall, I expected my interactions with the community and the university to be valuable to all parties
- Overall, I expected international students, the university and the community to benefit from community engagement
- Overall, I expected international students, the university and the community to benefit from social engagement
- Overall, I expected that international students, the university and the community to benefit from professional engagement

Note: All items were measured on seven-point Likert scales: 1 – Strongly agree to 7 Strongly disagree. A definition of community engagement per the context of this study was provided in the instrument.