Contents lists available at ScienceDirect





Tourism Management

journal homepage: http://www.elsevier.com/locate/tourman

The lone digital tourism entrepreneur: Knowledge acquisition and collaborative transfer

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ARTICLE INFO

Keywords: Digital marketing Entrepreneur Small tourism businesses Knowledge acquisition Mode 1 and Mode 2 knowledge Technology-in-practice

ABSTRACT

This paper addresses calls for more detailed studies of small tourism enterprises. Researchers report a lack of adoption and ineffective utilisation of digital technologies in smaller tourism businesses. The study focuses on two university-facilitated projects of digital marketing adoption and utilisation by 53 small and medium sized tourism businesses in the South of England. The framework for this study was driven by Modes of Knowledge Transference and Technology-In-Practice. The findings describe peer-to-peer knowledge acquisition and sharing that take place in university-led projects and suggests that a combination of Mode 1 and Mode 2 knowledge helps entrepreneurs to advance their digital marketing knowledge. Peer-to-peer clusters are an effective means of placing digital marketing knowledge and technology in the context of small and medium tourism business practice. The paper provides implications for destination marketing organisations and policymakers and suggests of research are offered.

1. Introduction

This paper contributes to the small business tourism literature by examining digital marketing (DM) knowledge acquisition in small and medium sized tourism businesses (SMTBs). DM is defined as "an adaptive, technology-enabled process by which firms collaborate with customers and partners to jointly create, communicate, deliver, and sustain value for all stakeholders" (Kannan & Li, 2017, p. 23). The DM toolbox contains an increasing range of free and paid technologies and platforms which SMTBs can use to reach and engage with customers, including email, online reviews, Google and Bing ads, social media ads, content marketing, and automated marketing, as well as third-party platforms such as destination marketing organization (DMO) websites, Booking. com and Airbnb. However, a recent report from the UK Government (HM Government, 2019, p.10) observes that the 200,000 small and medium sized tourism enterprises in the UK require support in "helping them to go digital", are lacking a support network, and are essentially suffering from the lone-wolf syndrome, being isolated and operating alone. The pay-per-click Google Ads platform is a salient example of the help that SMTBs need, being prohibitively expensive for smaller firms to fully utilize and its benefits hard to assess, requiring digital analytic capabilities often out of reach for small business owners unfamiliar with

digital advances in marketing. Support for SMTBs is essential given that the tourism sector is increasingly reliant on web-based technologies for regional competitiveness (Alford, 2018), in large part driven by consumer adoption of technology. It is estimated that 85 per cent of inbound visitors to the UK book their travel online (HM Government, 2019). "Tourism, like so many other industries, is experiencing a wave of digital disruption that threatens to restructure some traditional business models and make others obsolete" (OECD, 2017, p. 7).

Levels of adoption and use of DM by tourism entrepreneurs remains stubbornly low (Alford & Page, 2015), particularly for rural tourism micro firms (Kelliher, Reinl, Johnson, & Joppe, 2018). This is despite the obvious benefits of understanding customers better, developing closer customer relationships, and building upon small firm flexibility and informality (Sigala, Airey, Jones, & Lockwood, 2004; Simmons, Armstrong, & Durkin, 2011). Burgess, Sellitto, Cox, and Buultjens (2015, p. 433) make the stark observation that "the smaller the business is, the lower the adoption rate tends to be". This phenomenon is not limited to the tourism sector but is also common in other sectors where a general lack of adoption of e-business and e-marketing technologies and associated challenges are reported (Fillis, Johansson, & Wagner, 2003; Gilmore, Gallagher, & Henry, 2007; Harrigan, Ramsey, & Ibbotson, 2011). Researchers acknowledge that information and communication

https://doi.org/10.1016/j.tourman.2020.104139

Received 10 August 2019; Received in revised form 5 March 2020; Accepted 2 May 2020 Available online 22 June 2020 0261-5177/Crown Copyright © 2020 Published by Elsevier Ltd. All rights reserved.

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technology research in SMEs is commonplace, but there is a gap in knowledge concerning micro enterprise entrepreneurs and adoption (Bharati & Chaudhury, 2006; Fink & Disterer, 2006; Jones, Simmons, Packham, Beynon-Davies, & Pickernell, 2014). On first inspection this is somewhat surprising given the rate of technological innovation and the "ubiquity of non-proprietary technologies and open-access platforms" that offer small firms comparatively low-cost opportunities to adopt DM (Morgan-Thomas, 2016, p. 1122). However, identifying which technologies to invest in and how to manage them effectively requires a complex knowledge mix, comprising of strategy, technology and analytics across owned, earned and paid-for digital media platforms (Chaffey & Ellis-Chadwick, 2019).

Digital technologies have inexorably altered the marketing environment of small tourism businesses (Elliott & Boshoff, 2007), and while there are case studies of SMTBs that have adopted digital technologies, especially social media and user generated content, in their business models (e.g. Burgess et al., 2015; Sigala & Gretzel, 2017), consumer behaviour online (Xiang & Gretzel, 2010) and online destination marketing (Hays, Page, & Buhalis, 2013; Pan & Li, 2011) remain dominant themes in the tourism literature pertaining to DM. A recent paper by Navío-Marco, Ruiz-Gómez, and Sevilla-Sevilla (2018) provides a ten year review of e-tourism research and there is no mention of DM in respect of lone entrepreneurs. References to SMTB marketing tend to be within the wider context of destination marketing. For example, McCabe, Sharples, and Foster (2012, p. 37) refer to suppliers in the destination "having problems with online marketing" and lacking time and IT competence. Cost reduction and market penetration are identified as potential benefits for SMTBs created from collaboration with DMOs, but no details at an individual firm level are given (Wang, Hutchinson, Okumus, & Naipaul, 2013). Referring to the adoption of technology by small tourism businesses, Thomas and Ormerod (2018, p. 248) observe that there is "a small body of empirical work in this area".

Evidence within the tourism sector, scant though it is, suggests that a top-down, one-size-fits-all, approach to increasing the adoption and use of DM by entrepreneurs is largely ineffective (Mistilis, Buhalis, & Gretzel, 2014). Lashley (2018, p. 339) observes that "management development in small hospitality firms is at a low level, and entrepreneurs in micro firms do not typically give priority to their own development". Lashley goes on to advise that where agencies are aiming to improve destination competitiveness "by intervening in the development of managers of small hospitality firms', they should adopt "a much more subtle and targeted approach". The tourism sector is not alone in this regard; there has been criticism of standard business training programmes that include either finance or marketing training for SMEs, owing to their decidedly mixed results, globally (Giné & Mansuri, 2014). In the UK, the South West Productivity Commission report (2017) concluded that rural micro tourism businesses are hard to reach and do not engage with support. To compound the problem, the budgetary pressures on DMOs will, inevitably, impact on the support they can offer to SMTBs. In the space of just eight years, net current expenditure on tourism by local authorities (the largest overall funders of DMOs) in England has decreased 58 per cent from £142 m per annum to £59 m (Gov UK, 2011; 2017). A study of small tourism businesses in Scotland by the Federation of Small Businesses (2014, p. 11) found that "the support landscape" was "overly complex, confusing, poorly communicated and disjointed". This view is corroborated by McCamley and Gilmore (2017) who report that Northern Ireland DMOs do not engage effectively with SMTBs. Provision of e-learning tool kits has seemingly not resolved any of these issues even with digital government initiatives worldwide, which include creation of online DM resources for entrepreneurs (e.g. the European Commission's Tourism Business Portal -Digital Toolbox, the Australian Tourism's Tourism E Kit, and Visit-Britain's Digital Marketing Toolkit). Statistics related to engagement with these resources are not publicly available, however the low levels of adoption of DM by tourism entrepreneurs would suggest that impact is limited.

Given these low levels of adoption and the mixed results of formal training and digital knowledge transfer, urgent questions need to be addressed. How can policy-makers and tourism business support agencies help entrepreneurs in acquiring the knowledge necessary to market effectively in the digital age? And, what theory can we draw upon, and contribute to, that will support the study of SMTBs' DM knowledge acquisition and transfer? Referring to Thomas, Shaw, and Page (2011), who highlighted the lack of theorisation of small business research in tourism, Thomas and Ormerod (2018, p. 250) acknowledge that while "some progress has been made" ... "it has been sporadic and many of the published studies remain relatively unsophisticated in theoretical terms". Our multi-disciplinary study addresses this persistent problem by drawing on two theories that we believe will enrich our understanding of tourism entrepreneurs and DM. Firstly, we review the knowledge management literature which will be familiar to tourism scholars (Cooper, 2006; Ruhanen, 2018). We specifically address two types of knowledge, which Ruhanen refers to, as identified by Gibbons et al. (2010), namely Mode 1 knowledge (generated by universities and researchers) and Mode 2 knowledge (generated by practitioners and consultants). Our study is concerned with knowledge acquisition and collaborative transfer and therefore developing a better understanding of the types of knowledge that tourism entrepreneurs access enables us to study how that knowledge can be enriched and how its transfer can be improved. From mainstream small business research, we review the technology-in-practice literature (Morgan-Thomas, 2016), which is underpinned by the theory of sociomateriality (Orlikowski & Scott, 2008) and, more widely, by studies of technology in organizational practice (Feldman & Orlikowski, 2011; Zammuto, Griffith, Majchrzak, Dougherty, & Faraj, 2007). Technology-in-practice literature provides a highly apposite, conceptual position from which to study the adoption of DM by tourism entrepreneurs and will challenge the way in which tourism scholars view SMTB technology adoption and implementation. In turning to the technology-in-practice literature we are also responding to wider calls in tourism for researchers to look to external disciplines relevant to small business research (Shaw & Williams, 2010). We make a further contribution by providing evidence of a useful synergy between the modes of knowledge transfer and technology-in-practice. This synergy is captured in the model which is presented in the discussion section of our paper. More broadly, our study makes a contribution not only to the small business tourism research agenda (Alford & Page, 2015; Ateljevic, 2007; El-Gohary, 2012; Komppula, 2014; Thomas, 2013; Thomas et al., 2011) but also informs our understanding of how tourism business support agencies can move effectively to support entrepreneurs in the tourism sector (Ateljevic & Page, 2017; Chang, 2011; McCamley & Gilmore, 2017; Mistilis et al., 2014; Thomas & Wood, 2015).

In addressing these questions, we provide evidence from two digital marketing projects: 1) "Digital Destinations: Exchanging Digital Technology Knowledge in Local Tourism Economies"; funded by the Economic & Social Research Council (ESRC); 2) "SME Digital Transformation"; funded by the UK Higher Education Innovation Fund (HEIF). These projects involved 53 entrepreneurs where the sole business owner is the foci of the study. This focus is important as there are few studies of DM in relation to the sole entrepreneur and, in the absence of a designated marketing resource (employee), the owner will assume responsibility for sales and marketing activity in the firm (Carson, Cromie, McGowan, & Hill, 1995; Moriarty, Jones & Rowley, 2008). Secondly, entrepreneurs are highly influential in the direction and growth focus of the firm, in common with small firms in other industries (Jones, Morrish, Deacon, & Miles, 2017; Jones & Rowley, 2011). Finally, entrepreneurs are acknowledged as being innovative and carrying out entrepreneurial marketing activities to enhance destination competitiveness to meet the gaps in DMO's service provision (McCamley & Gilmore, 2017).

2. Theoretical background

2.1. Digital marketing and SMTBs

In much the same way that small business marketing is not a small version of larger firm marketing (Hill, 2001), DM should be viewed as a new approach to marketing rather than traditional marketing that is supported by digital means (Järvinen, Tollinen, Karjaluoto, & Javawardhena, 2012; Liu, Karahanna, & Watson, 2011; Sultan & Rohm, 2004; Taiminen & Karjaluoto, 2015). There are six particular issues related to small firm adoption of DM: 1) the technical competency of the entrepreneur and the value that he/she attaches to DM; 2) the fit between DM and the firm's business model; 3) the challenges associated with integrating traditional marketing practices with DM; 4) needing a willingness to test new marketing approaches by advancing beyond website usage (Alford & Page, 2015; Hoffman & Novak, 2011; Kim, Lee, & Lee, 2013); 5) building customer relationships through social media (Felix, Rauschnabel, & Hinsch, 2017; Malthouse, Haenlein, Skiera, Wege, & Zhang, 2013); and 6) being able to meet the challenge of the growing complexity of the marketing landscape (Alford, 2018), requiring greater resources to manage DM.

Entrepreneurs are found to be lacking in awareness of the accrued benefits of DM which creates a barrier to adoption (Harrigan et al., 2011; Jones et al., 2014; Wolcott, Kamal, & Qureshi, 2008). Where tourism entrepreneurs see the benefits, adoption of DM is more likely (Elliott & Boshoff, 2007; Simmons, Armstrong, & Durkin, 2008). More recent studies confirm that these challenges still remain, including the entrepreneur's lack of competency and knowledge and a constrained view of the benefits of DM (Taiminen & Karjaluoto, 2015). Entrepreneurs also tended to focus on the immediate and attainable impact of technology implementation, rather than the longer-term outcomes (Aldebert, Dang, & Longhi, 2011; Jones et al., 2014).

While the website remains the focal point for most small firms, partly because that is where the final sale is likely to take place (Jones et al., 2014), effective DM for tourism entrepreneurs involves the holistic management of a mix of owned, earned and paid digital channels (Alford, 2018; Chaffey & Ellis-Chadwick, 2019). It also requires an extension and integration of conventional marketing practices with digital platforms (Kotler, Kartajaya, & Setiawan, 2016). Generating customer insight is of critical importance for digital marketers and so we posit that entrepreneurs must now understand and include their target customers' search behaviour if they are to develop a successful search engine optimisation strategy (Berman & Katona, 2013). Paid-for advertising remains a potent part of the marketing mix, but now entrepreneurs and SMTBs require the technical skills to master the intricacies of setting up, managing and monitoring pay per click advertising campaigns (Hutchinson & Quintas, 2008). Furthermore, tourism entrepreneurs have to contend with powerful intermediaries, for example Booking.com, which dominate the customer's online journey, particularly at the point of search.

The entrepreneur needs to understand how to generate insights from an abundance of digital data to effectively compete (Arons, van den Driest, & Weed, 2014; Kotler et al., 2016). Successful DM implementation requires an ability to accurately measure its impact, which in turn demands new technical and analytical skills and capabilities of entrepreneurs. The UK government's Department for Business Innovation & Skills (BIS, 2015) reports that, despite there being a positive link between digital skill levels and turnover growth, a quarter of SMEs do not possess basic digital skills. Indeed, Leeflang, Verhoef, Dahlström, and Freundt (2014, p. 4) identify "the talent gap in analytical capabilities" as a particular cause for concern for digital marketers. Entrepreneurs are challenged with managing the data generated through digital channels and turning that data into intelligence (Ateljevic, 2007). This poses a significant existential problem, namely that entrepreneurs are less likely to adopt DM because they lack the skills necessary to evaluate its benefits and relevance to their own business model.

2.2. Modes of knowledge transference

As this study focus concerns university-hosted projects, we are interested in whether and how knowledge transfers via engagement with tourism entrepreneurs. There are systematic failures recorded which relate to knowledge transference from universities providing academic research to tourism businesses (Ruhanen, 2018; Thomas & Ormerod, 2017), and also between DMOs and SMEs (McCamley & Gilmore, 2017). There are two sources of knowledge that can be acquired by businesses: Mode 1 knowledge and Mode 2 knowledge (Gibbons et al., 2010; Tribe, 1997). Mode 1 includes knowledge created within universities, being academic-led and disseminated through scholarly journals, with impact on the practitioner being highly limited. Mode 2 knowledge is generated outside of academia, often by consultants, companies and governments, and is more accessible to practitioners. Mode 2 knowledge, while often 'packaged' in business-friendly formats, is described as subject to normative constraints and therefore less conducive to free thinking and ideation (Rip, 2002). In many cases the sources will either lack the methodological rigour associated with academic endeavour or the methodology is not made transparent in the way that is required by peer reviewed journals. Mode 1 knowledge is investigator-led, scientifically rigorous, and has the potential to foster creativity and innovation; the problem being that it is currently largely inaccessible to industry users, in part due to the impenetrable nature of academic writing as viewed by practitioners (Ruhanen, 2018; Thomas & Ormerod, 2017). Kannan and Li (2017, p.40) proffer the following solution: "Practitioners can provide the raw material and academics can provide the rigor, and together they can extend our knowledge of the everchanging digital environment."

2.3. Technology-in-practice

Caution is advised to avoid making assumptions about small businesses and their relationship with technology for marketing (Thomas et al., 2011). In reflecting on what those assumptions might be and how they might constrain our understanding of tourism entrepreneurs and DM, we have found the technology-in-practice literature to be particularly insightful (Feldman & Orlikowski, 2011; Leonardi, 2011; Mazmanian, Orlikowski & Yates, 2013; Morgan-Thomas, 2016; Scott & Orlikowski, 2014; Zammuto et al., 2007). A helpful review by Morgan-Thomas (2016: p. 1129) found that "current SME research on ICT adoption builds on the principle of determinism", underpinned by implicit assumptions that technology is a largely inflexible 'given' and it is the user (e.g. entrepreneur) who must adapt (e.g. learn how to use the technology, shape the business model around the technology, allocate resources to master the technology) if the business is to enjoy the benefits of DM. Technology-in-practice is guided by a different set of ontological assumptions: technologies are intertwined with, and shaped by, the user and are rarely used as intended and ultimately must be seen in the context of practice. The technology-in-practice perspective assumes that the entrepreneur's focus lies with knowledge pertaining to perception of the technology, the purposes it currently serves and could serve in the future, and opportunities for innovation through technology, rather than focusing on how to use the technology. In an earlier study, which pre-dates much of the technology-in-practice literature, but is closely aligned to it, Alford and Clarke (2009, p. 580) posed the question: "how do we ensure that, as technological solutions are implemented within tourism, due consideration is given to human-centred issues?" We argue that these business-centred and human-centred viewpoints are crucial in ensuring a level of critical reflection when studying the adoption of DM by SMTBs, and when designing interventions that support the lone tourism entrepreneur.

3. Method

A qualitative research design was adopted using inductive enquiry to

offer new insights from a relatively unknown aspect of study using a "discovery orientated approach" (Jaworski & Kohli, 1993, p. 1; Morrish & Jones, 2020); that is, data collection carried out using fieldwork that enables and informs theory development. This approach allowed for developing new understandings of a new phenomenon using a case study (Eisenhardt & Graebner, 2007; Yin, 2009). Substantial data were collected from two digital projects based in Dorset, South of England. The overarching framework for the projects involved the SMTBs developing a DM plan to achieve a minimum of two DM objectives, which the entrepreneurs began formulating at the first seminar. This design was chosen to facilitate the transference of Mode 1 knowledge and Mode 2 knowledge. The university-led meetings which took place at the university campus consisted of an introductory presentation based on the project team's research and expertise (Mode 1 knowledge), and which would help the SMTBs to develop their DM objectives. For example, in the first meeting, the entrepreneurs were provided with frameworks for DM strategy and in the second meeting at the university they learned how to engage in data-driven marketing, encompassing DM analytics. These presentations were followed by discussion with, and among, the entrepreneurs and, in many cases, by blog posts by the entrepreneurs to the project website where they would reflect on the meeting (Mode 2 knowledge). This also allowed the project team to share information with the participants (Mode 1 knowledge). As the project progressed, the entrepreneurs were given more responsibility to self-organise their meetings. This led to entrepreneurs volunteering their business premises (e.g. hotel, restaurant or meeting rooms) for their meetings during which one participant would be nominated as the meeting facilitator and another as a note-taker. A member of the university project team would attend these meetings but mainly in an observer role, keeping participation to a minimum to encourage the creation and transfer of Mode 2 knowledge. The final meeting, held on the university campus, was led by the businesses during which they presented their final DM plan. The design from the inception of the projects was for ownership of the process to transfer gradually to the SMTBs and thereby adhere more fully to the principles of technology-in-practice, whereby DM would be seen in the context of the business.

Engaging with entrepreneurs as participants allowed for relationships to develop between the university and the participants, allowing for co-creation of the project activities and co-design of the project to take place, as entrepreneurs could see that this engagement would ultimately benefit them. The adoption of a technology-in-practice approach offers resolutions to reported challenges that SMTBs face, while community-based-projects that are action-research based also serve to reduce the previously reported issue that tourism entrepreneurs tend to be research averse (Cooper, Prideaux, & Ruhanen, 2003; Shaw & Williams, 2010). Our technology-in-practice approach builds on knowledge of integration of community-based activities and participatory action research, prevalent in both mainstream and tourism studies, for example Bertella's (2011) community based Northern Norwegian study on communities-of-practice and Jennings, Scantlebury, & Wolfe (2009) study on action research cycles, team-based learning and communities-of-practice.

Data were collected from project application forms, university-led seminars, video recorded meetings, project website blog posts, cluster meetings, and end-of-project presentations. These were uploaded to the online project hub, consisting of the project website, blog and Slide-Share. Data abstraction included the use of template analysis (using NVivo) and researcher coding and re-coding clerically to make connections from the data, the observation material, and to construct connections with the research findings (Suddaby, 2006).

3.1. The sample

Our purposive sample consists of entrepreneurs from SMTBs (N = 53) as a heterogeneous sample from both projects (Shaw, 2006). The

two datasets that were merged originated from two DM studies: Digital Destinations (DD) (2012–2014) which comprised of 53 SMTBs, and Digital Transformation (DT) (2014–2017), which comprised of 10 re-recruited participants from the original DD project of 53 SMTBs. The entrepreneurs (Table 1) represent a range of sectors which together comprise the 'visitor economy' in the region and include: hotels, visitor attractions, bed and breakfast, self-catering, outdoor activities, and museums.

Through a partnership with the local DMO, SMTBs were invited to attend an information evening regarding the projects. This generated a lot of interest, with over 100 SMTBs completing the application form. On the basis of the information provided on that form, and with input from the local DMO, the research team were able to select 53 SMTBs. In part, participants were chosen on the basis that they were entrepreneur owner-managers who were responsible for carrying out digital marketing and making strategic decisions, including technology investment decisions in the firm. However, as the research team wanted to study how DM knowledge is transferred between the SMTBs, it was important to recruit a mixed group of entrepreneurs in terms of their knowledge and experience of DM, albeit with shared common goals of improving their DM and accessing support that hitherto had been unavailable to them. The level of knowledge of each entrepreneur was established on the basis of information provided on the project application form and also through guidance of the local DMO.

The cohort was divided into 6 clusters in order to provide a smaller group size that was more intimate but would still provide diversity of

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Case	Business type	Employees	Case	Business type	Employees
Digital Olympians		AppsFab			
1	Education	3	9	Charity	133
2 ^a	Heritage	8	10 ^a	Hotel	40
3	Tour operator	3	11	Self-catering	2
4	Restaurant	30	12	Cycle hire	9
5	Leisure club	10	13 ^a	B&B	1
6	Activities	8	14	Hotel	25
7	Hotel	30	15 ^a	B&B	1
8	B&B	4	16	Attraction	45
			17	Ski centre	45
			18	Tourism office	5
Online	Crusaders		AppPrentices		
19	Outdoor	1	27	Hotel	100
	activities				
20	Hotel	40	28 ^a	Self-catering	5
				agency	
21	Power kite	2	29 ^a	Surf training	6
	training			centre	
22	Yacht charters	7	30	Conference	2
				organiser	
23	Language	30	31	Golf club	12
	school				
24	Retail	50	32 ^a	Water park	45
25	Holiday letting	20	33	Boat cruises	7
26	Museum	13	34	Adventure	25
				sports	
			35	Arts centre	120
Digital Dragons		Social Maniacs			
36 ^ª	Tourist	4	45	Dance venue	17
	attraction				
37	Crafts centre	11	46	Arts agency	10
38	Attraction	25	47	Self-catering	4
39	Hotel	45	48	Visual arts	1
40	B&B	1	49 ^a	Sightseeing	30
				agency	
41	Accom. agency	1	50	Sightseeing	1
				agency	
42	Golf club	30	51	Country estate	47
43 ^a	Self-catering	1	52	Self-catering	9
44	Tourist	100	53	Self-catering	1
	attraction				

^a DT participants.

knowledge, experience and opinion. Each cluster was asked to assign their cluster a name to provide a unique identity and an element of fun and gamification. More importantly, the researchers ensured that each cluster comprised SMTBs from different sectors and with different levels of DM knowledge, in order to encourage richer knowledge exchanges. For example, the AppPrentices cluster comprised of entrepreneurs with different approaches and attitudes to DM. The owner of the surf training centre (Case 29) had a keen interest in DM, was able to make and implement decisions quickly, and had a predominantly young team who were willing to use and experiment with social media. The entrepreneur from the arts centre (Case 35) also had a keen interest in DM but had undertaken less experimentation in social media. The owner from the self-catering agency (Case 28) was older and had relatively little experience of DM. In many ways he lamented the passing of the more traditional approaches to marketing, but he was keen to update his DM knowledge while being able to share his own tacit knowledge.

3.2. Data collection

Data was collected at multiple contact points consecutively throughout both projects. This provided a more detailed understanding of the issues for entrepreneurs who were trying to acquire knowledge of DM across these contact points. Mode 1 knowledge, including DM planning frameworks, examples of DM campaigns, and the use of DM analytics, was used. DM university students were assigned to each entrepreneur to support their learning and entrepreneurs met regularly with the project leads (the researchers), their cluster 'peer' group, and all together on project days. Explicit, technical 'formal' knowledge on DM was provided to the entrepreneurs in workshops by the university project leads (Mode 1) and by an independent social media consultant (Mode 2).

3.3. Data management and analysis

Due to the amount and complexity of the data, analysis tools were used to support the data coding. Each case study was coded and analysed as an individual data source. Axial codes allowed for analysis across the data sets, identifying reoccurring themes (Bazeley & Jackson, 2013), and supported by the use of Template Analysis (Brooks, McCluskey, Turley, & King, 2015). A number of discrete steps were followed to create, organise and analyse the merged dataset (Fig. 1). First, the two *QSR Nvivo* DD and DT files were merged into one, resulting in a combined substantial dataset consisting of 39 individual data sources from 53 SMTBs over a 3-year period. The 53 firms in the dataset (Table 1) comprised of 25 micro firms (1–10 employees), 21 small firms (11–49 employees) and 7 medium firms (50–249 employees). Reliability of data was ensured by viewing data from a multiple range of sources and with researchers working closely on the projects to capture rich and meaningful data. Content validity was ensured by member checking; that is, going back to probe for further confirmatory answers to elucidate the findings during and following the projects (Carson, Gilmore, Perry, & Gronhaug, 2001).

An initial coding template was created, informed *a priori* by pertinent themes from the literature, with sub nodes subsequently developed to provide a more granular analysis. This deductive approach is in keeping with Template Analysis which "encourages the analyst to develop themes more extensively where the richest data (in relation to the research question) are found" (Brooks et al., 2015, p. 203). Business research methods authors note that inductive research may contain aspects of deduction (Saunders, Thornhill, & Lewis, 2015) and, from this epistemological position, the authors referred to priori themes (third column Fig. 1) in the literature to inform their template (including Mode 1 and Mode 2 knowledge, technology-in-practice perspectives and small firm tourism research), while retaining the flexibility necessary to discover new topics of interest.

The initial template was applied to a subset of the data, consisting of sources related to two of the clusters; in so doing, the authors considered whether the template could be used to make sense of the data in light of the research question guiding this study. Where that was the case, then the extracts were coded to that theme, helping to substantiate the framework; where this was not the case, then a new theme was created and applied to further data for verification. Identification of key thematic areas was further corroborated through text frequency analysis in Nvivo.

This development and refinement process involved a further two cycles of coding, over the remaining clusters, with both researchers independently reviewing the template and discussing the themes as they emerged. Full use was made of the query and exploration tools within the software, ranging from text searches to cluster analysis to uncover patterns and themes and to study the context in which those themes

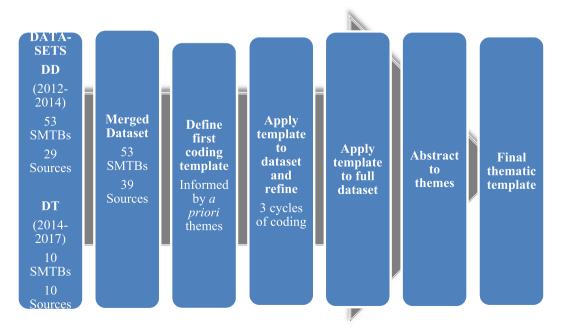


Fig. 1. Template analysis process.

were discussed. The researchers finalised the template when they were confident that all sections of the dataset that were relevant to the research question had been coded (Brooks et al., 2015). The iterative development of the coding template involves close involvement of the researchers as they try to make sense of the data (Suddaby, 2006) and is a central aspect of the use of template analysis in psychology research. As such, this method is well suited to a relatively unknown topic of study such as this as it allows for beginning the analysis with an informed position from the literature while constructing and developing new theory using empirical data from fieldwork (Eggers & McCabe, 2016; Jaworski & Kohli, 1993).

4. Findings

The technology-in-practice perspective posits that DM adoption by SMTBs will be more effective if we establish a context in which the adoption takes place. The study of the participant entrepreneurs during these projects allowed this to take place. Table 2 below shows the topics of most concern to entrepreneurs. These are listed in order of importance. It is interesting to note that the most significant themes are 'measurement of DM' and 'DM strategy' in terms of what entrepreneurs want to know, and also, 'role of peer clusters' and 'knowledge acquisition through sharing' in terms of how entrepreneurs acquired and transferred their knowledge. The results in Table 2 also illustrate that all these aspects are of fairly equal importance to all firms regardless of size, within the SMTB classifications of micro (1–10 employees), small (11–49 employees), medium (50–250 employees).

Section 4.1 describes the DM topics that were of most concern to the entrepreneurs (a Table 2). Section 4.2 examines how knowledge was acquired and transferred during the projects (b Table 2).

4.1. Digital marketing knowledge

4.1.1. Measurement of DM

One third of the references coded to 'measurement' were contained in the project application form with two thirds occurring throughout the other sources – group discussion, blog, etc. This indicates an awareness of the importance of measurement as a DM concept from the outset and its importance as a growing theme throughout the projects.

The following extracts from two entrepreneurs illustrate what can be measured:

"What pages are being looked at, (and whether) should they be enhanced" (Case 13, DT workshop).

"Working in house, we have the ability to change the website regularly and update social media pages. SEO works well for us with

Table 2

DM themes by firm size.

Themes	1-10 employees (25); 11–49 employees (21); 50–250 employees (7) Number of employees			Total
	1–10	11–49	50–250	
Role of peer clusters in DM learning ^b	38	32	14	84
Measurement of DM ^a	36	36	7	79
Knowledge acquisition through knowledge sharing $^{\rm b}$	35	32	11	78
DM Strategy ^a	32	30	5	67
Learning-by-example ^b	17	13	2	32
Test and learn approach to DM ^a	7	9	0	16
Collaborative marketing ^a	7	5	2	14

Note: the numbers in the cells denote the number of text references coded to each theme.

^a DM topics that were of most concern to the entrepreneurs.

^b How DM knowledge was acquired and transferred during the projects.

organic click through rates compared to expensive pay-per-click" (Case 36, DT workshop).

A significant number of the references to measurement concerned the entrepreneurs' lack of knowledge in that area, and there was clearly a need for them to be more conversant with the techniques and metrics for measuring DM. Additionally, while there is a certain level of knowledge among the entrepreneurs related to measurement, as evidenced in the extracts above, significantly this rarely extended to the ability to be able to measure the user's journey through to conversion and thereby an inability to measure the true impact of investment in DM.

Entrepreneurs expressed a lack of previous opportunity to view and benchmark their DM statistics against similar firms. This made certain indicators (for example, website bounce rates) difficult to evaluate when there is no meaningful comparison:

"It would be quite interesting for us ... to have some kind of benchmarks to work with as well, because I don't really know if our website's performing really well or actually not very well at all, whether it needs to be performing better. And that's the trouble with analytics, you're just looking at your own sort of stats, which could be quite meaningless in a vacuum." (Case 44, Cluster meeting).

4.1.2. Digital marketing strategy

A central feature of the projects was the requirement of each entrepreneur to set two DM objectives for their business and to devise a DM plan to achieve those over the lifetime of the projects. The entrepreneurs, on the whole, responded positively to this challenge and there was a strong feeling among participants that joining the projects would give them the space and time to focus on DM and either start the process of creating a DM strategy or develop and improve an existing one. In the following extract, taken from a 'Social Maniac' cluster meeting, the firm's owner is referring to a prior cluster meeting facilitated by the university to encourage participants to focus on two DM marketing objectives; it captures the difficulty that entrepreneurs have in setting time aside to focus, while at the same time demonstrating their capacity to focus on a specific task.

"I just thought it was a great focus session to actually have a chance for a couple of hours to sit down and think rather than all the practicalities of the business that you do, just to actually think in one direction and on one subject, devote what you really want to achieve, because I certainly am still thinking about which direction to go on ..." (Case 50, Social Maniacs cluster meeting).

A word search for 'strategy', across the entire dataset, shows that the terms 'implementing', 'building', 'developing' are closely associated with it. The data reveals that there is a strong appetite among the entrepreneurs for developing a formal plan or strategy for their business and that, in many regards, they welcome the structure that such a plan provides. The following extract from the university-mediated first cluster meeting, convened at the university, demonstrates participant interest in developing strategy and also the role that the university can play in facilitating this.

"... there were a couple of useful slides that we flicked through earlier on, which were talking about implementing, or designing a strategy, I mean, is there a, kind of, is there a strategy tool that we get to use as part of the project, or do we have to, kind of, piece our own together from the tools that's there? Is there a formal strategy building aspect?" (Case 6, Digital Olympians).

However, it should also be noted that a number of businesses struggled with setting two specific DM objectives and the extract below highlights the importance of understanding the context in which DM is being adopted. "..for me it was really hard to whittle it down to two objectives, because to me it feels it's almost a step too far already." (Case 45, Social Maniacs peer-led cluster meeting).

4.1.3. Data-informed digital marketing

This is a theme that emerged during the cluster discussions and reflects the importance for SMTBs to measure the return on investment of their marketing and the problems associated with DM. The extract below illustrates the constantly evolving digital landscape that tourism entrepreneurs operate in, in this case how Facebook have changed their charging model.

"The other screw ball I found recently is now Facebook are charging you to get engagement and get interest and it's, like, well, actually, if I've not tested it enough to have a strategy, why am I going to pay them money to boost the amount of people that are seeing it?" (Case 6, AppsFab cluster meeting).

Deciding where to invest is a constant challenge for SMTB entrepreneurs who face a fast-moving digital landscape in which powerful channels such as Facebook can appear to hold all the cards. Without careful monitoring, paid online advertising, whether through social media or other platforms such as Google Adwords, can escalate to become a significant cost for small firms. The reference to testing and strategy reaffirms the importance of SMTB marketing adopting more of a data-informed approach as opposed to the more haphazard approach that has traditionally characterised small business marketing (Gilmore, 2011). However, the lone tourism entrepreneur is challenged with keeping pace with the type of changes described in the extract above and is unlikely to have the time or competency to acquire this knowledge solely through their own online research.

4.1.4. Collaborative digital marketing

While there was a collaborative approach to shared learning (discussed in the next section), what was more surprising was the level of discussion related to how these entrepreneurs could work together to enhance the customer experience through creating new collaborative marketing ideas:

"My biggest objective is really that our guests that come to stay with us have a good time and love the forest and just hearing other comments here, what Nigel (Case 16) and Sarah (Case 18) were saying is that I think a lot of our guests that come to us of a younger generation, don't even know about Exbury [a visitor attraction] and what we show them and what we share on our Facebook page for them, we always get people commenting on Exbury and excited about it and the same with the New Forest, everything that we share, it's the pictures, and everything, you know, there's so much that we can all work at together." (Case 13, AppsFab university seminar).

There was a realisation among participants that, individually, they can only offer a limited number of elements of the customer's experience, but through collaboration they can create a richer offer. This not only enhances the customer experience but, from a DM perspective, creates keyword-rich online content which plays the dual role of firstly, reaching more customers through a better ranking on Google and secondly, encourages them to stay longer on the website through a richer online experience and embedded calls-to-action (Chaffey & Ellis-Chadwick, 2019).

4.2. Acquiring and transferring knowledge

The researchers investigated how the participant entrepreneurs acquired knowledge across the different points of project engagement, including application forms, university-led discussions, peer-led discussions, etc. Knowledge was acquired through unlocking of the entrepreneurs' knowledge, often by sharing knowledge with their peers, learning by example, and by 'formal' Mode 1 and Mode 2 knowledge transfer from the project team.

4.2.1. Role of peer clusters in digital marketing learning

It is perhaps not surprising that learning about DM is the strongest generic theme, given the focus of the projects. However, the distribution of coding across the dataset is of interest. Over 90% of the 'learn about DM' references are contained in the application form that firms completed when joining the projects, whereas 'how to measure DM' is more evenly distributed, with only one third of the references contained in the application form and the remaining two thirds distributed across the cluster meetings. The dynamics of the cluster meetings led to themes being surfaced by the entrepreneurs that they were not sufficiently aware of when they were completing the application form, indicating progressive learning through the projects. The following extract from the 'Social Maniacs' cluster meeting illustrates the tacit knowledge that resides in small firms and the role of the cluster meetings in extracting and transferring that knowledge:

"Just to ask you a question on target audience. Ours is really simple. We're young professionals, 25 to 35, and active retired, 55 to 70 really, and the market I want to aim at with this is women aged between about 21 and 40. Sorry. You have to be like that don't you? (Case 52, Social Maniacs cluster meeting).

Of course you do. I'm impressed that you're able to target such a narrow sector basically. (Case 50, Social Maniacs cluster meeting).

But you can with the Facebook you see, because once you've got on to Facebook it's quite easy isn't it to target just women? Because in the market that I'm in 60 per cent of them make the decision as to whether they're going to come or not." (Case 52, Social Maniacs cluster meeting).

The extract above also illustrates how the exchange serves the important purpose of validating their knowledge and receiving affirmation from their peers. There was a palpable sense throughout the projects that the entrepreneurs enjoyed sharing their insights and that this was, in large part, due to the lack of opportunity for them to do so during their day-to-day operations.

While the peer-to-peer interactions within the projects provided freeflowing information, there remained a perceived need among the entrepreneurs for structure and external review to provide focus and clarification.

"There are many areas to develop and have trouble knowing where to focus and in what priority. By external impartial review of our marketing it would help to remove this barrier." (Case 29, Application form).

4.2.2. Knowledge acquisition through knowledge sharing

There was definitely a sense in the projects, among the entrepreneurs, that you have to 'give a little to get a little', and while entrepreneurs clearly wanted to acquire knowledge from the projects, there was in fact a significant emphasis on the willingness to share knowledge. Overall the projects were characterised by openness and transparency and, from the outset, entrepreneurs were open and prepared to share, with over 90% of the references to 'knowledge-sharing' occurring in the application form. The following extract is illustrative of that sharing mentality:

"To gain knowledge & understanding on new ways of promoting our business. The opportunity to share our existing knowledge & discuss ideas with other businesses in the area." (Case 17, Application form).

4.2.3. Learning-by-example

The entrepreneurs demonstrated a strong preference for learning

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through each other's experiences. A significant barrier to small business adoption of DM lies in an inability of entrepreneurs to understand the benefits and how it will contribute to the profitability of the business. The projects reveal that from the outset a major attraction of the projects for the entrepreneurs was the opportunity to learn by example from the tried and tested experiences of other entrepreneurs.

"Sharing working solutions with like-minded people within the industry." (Case 36, Application form).

"I believe that as groups within the project we can disseminate and learn from best practice, and it will be very interesting from a professional perspective to engage not only with students but industry peers who share some of my own concerns and problems." (Case 16, Application form).

Frequently entrepreneurs would share the specifics of DM campaigns they had undertaken during cluster meetings, for example Google Adwords or email marketing campaigns, sharing technical and marketing insights from their own perspective and as relevant to their business model. The importance of this is highlighted in the following extract from one of the cluster meetings where the participants reflected on the examples used by the social media consultant in the first university-mediated seminar.

"Some of the content, whilst being fun, seemed more geared towards larger, corporate organisations and I would appreciate more time spent in examining the possibilities available to smaller, family-run businesses." (Case 46, Social Maniacs peer-led cluster meeting).

The participant was referring to an example used by the consultant to the projects of an online campaign by a major confectionary brand, designed to show how social media could be an effective means of securing promotional reach. However, there was general agreement in this cluster meeting that the example used, while interesting, was beyond the reach of SMTBs in terms of their resources.

5. Discussion

Despite being time constrained due to the demands of running their own business, the majority of the participant entrepreneurs enthusiastically engaged with both projects with high levels of attendance. In total 50 out of 53 SMTBs stayed with the first project and all of the 10 SMTBs with the second project through to conclusion. Thus, there was an appetite for acquiring and applying new DM knowledge. Entrepreneurs were able to leverage a number of resources during the time of the projects which they otherwise would not have had access to. These included 1) the acquisition and reciprocal sharing of knowledge, 2) access to learning from shared experience and practical examples of DM from their peers, which created knowledge that has contextual relevance for the owner of the firm, 3) interaction with their peers which enabled entrepreneurs to benchmark their performance, confirm current practice, and to ideate in a collaborative space, within a structure provided by the university as mediator and 4), suggestions and expressions of interest to co-create future customer experiences through collaborative marketing with other businesses in the visitor economy.

The combination of Mode 1 and Mode 2 knowledge provided an effective way for entrepreneurs to acquire knowledge of particular relevance to their business. The cluster meetings allowed peer sharing and feedback of ideas related to information delivery from Mode 1, which allowed the entrepreneurs to decide how best to apply the concepts (for example, integrating DM into the business, and more effectively measuring marketing via digital means). The DM concepts delivered in university-led seminars (Mode 1), for example a template for DM strategy, provided a structure and information stream of applied research. It provided direction and prevented Mode 2 peer sharing of knowledge (in this study, via cluster meetings) becoming an informal 'talking shop'. Importantly, the entrepreneurs responded positively to

this structure and did not regard it as unnecessarily restrictive. This suggests that in a DM context, SMTBs require a formal plan, contrary to earlier non-digital small business marketing studies which found that entrepreneurs tend to be "disjointed and haphazard" in their marketing practice (Blankson & Stokes, 2002; Gilmore, 2011, p. 141). The findings reveal a strong appetite among entrepreneurs for formalising their DM, formulating measurable objectives, and proposing a DM strategy that would help achieve them.

A key outcome of the projects was that it enabled the entrepreneurs to assimilate DM out of that technology becomes isolated fromfrom the projects from Mode 1 and Mode 2 knowledge athat technology becomes isolated fromcquisition and knowledge transference through their own interpretation of events during the projects. For example, cluster group work and peer sharing of knowledge, along with the entrepreneur's own articulation and application to their own business model (as each small business is inherently unique). The technology-in-practice approach to knowledge acquisition, most strongly advocated by Morgan-Thomas (2016) and manifested in this study through the way in which the entrepreneurs learned through practical examples, highlighted how DM could be adopted at an achievable level. This approach is less likely to create cognitive dissonance and disillusionment arising from the gap between unrealistic expectations from DM technology and failed delivery.

The opportunity to share knowledge and working solutions with other businesses offers a strong motivator for entrepreneurs to join a peer cluster project. The propensity to share knowledge with openness as observed in these projects, is converse to Cooper's (2006, p.52) assertion, "that individuals hold tacit knowledge as the basis of their competitive advantage which explains their reluctance to share or communicate it". The surfacing of DM knowledge in the peer-facilitated cluster meetings and, in certain cases, being shared on the projects' blog and social media, is an example of tacit knowledge being made explicit and then shared and transferred (Cooper, 2006). In acquiring knowledge on how to use the technology, entrepreneurs were more focused on sharing and acquiring knowledge on how the technology could solve their business problems. Within the projects the entrepreneurs were able to view technology as an enabler of more effective DM, rather than as an end in itself, addressing criticisms of the deterministic approach to IT implementation, levelled by Alford and Clarke (2009) and Morgan--Thomas (2016), namely that technology becomes isolated from business practice. This helps entrepreneurs to avoid the costly pitfalls associated with a knee-jerk reaction to keep ahead of the technology race, with no clear business case for the investment. According to Hialager (2002) small businesses tend to follow innovation only after they have assured themselves that the investments or changes are feasible, which is unsurprising given their lack of resources. The sharing of DM solutions among the entrepreneurs allowed, to a certain extent, for feasibility to be assessed.

The entrepreneurs also revealed an interest in going beyond acquiring tacit knowledge which Ruhanen (2018, p. 358) describes as the "practical knowledge needed to perform a task" to more strategic objectives, including marketing collaborations across different sectors within tourism (Binkhorst & Den Dekker, 2009). The motivations for entrepreneurs joining the projects affirm Cooper's (2006) observation that, for successful knowledge transfer to take place, entrepreneurs need to see the relevance to their business, and in this regard peer networks have been found to be more valuable than traditional training (Lionberger & Gwin, 1991).

The following Model (Fig. 2) illustrates the combined approach to Mode 1 and Mode 2 knowledge acquisition and collaboration. The authors' intention is to provide a model that captures the benefits of combining Mode 1 and Mode 2 knowledge with entrepreneur-generated knowledge, and which can be used by tourism support agencies. Both tourism and other industry sectors highlight the need for further government support for smaller businesses to enable them to engage with DM (for example, Alford & Page, 2015; Beckinsale, Levy, & Powell,

Mode 1 Knowledge

- University scientific rigour
- Inaccessible to SMTBs
- Difficult to apply to real-world context
- Not outcome-focused
- Abstract & theorydriven

Mode 2 Knowledge

- Consultant industryrelevant
- Normatively constrained
- Not always relevant to SMEs
- Lacks methodological rigour at times

Collaborative knowledge acquisition & transfer enabling a Technology-in-Practice perspective

- Mode 1 & Mode 2 provide DM framework, insights and expert guidance
- User centred & led by entrepreneurs
- Technology directly applicable to the entrepreneur's own business model
- Acquiring knowledge by peer sharing & examples
- Business solutions-oriented
- Benchmark own performance
- Creating realistic expectations from technology in use
- Adoption & integration of knowledge, flexible & adaptive
- Co-creation of customer experience

Fig. 2. DM knowledge acquisition and collaborative transfer: An SMTB model.

2006; Beckinsale, Ram, & Theodorakopoulos, 2011; Taiminen & Karjaluoto, 2015).

The reduction of budgets for DMOs and local government business support agencies has exacerbated the marketing capabilities gap (Day, 2018) and widened the digital divide between what SMTBs can offer and what the digitally and social media-engaged consumer expects. While there is wide acknowledgement of the barriers facing entrepreneurs in adopting digitalization in its various forms, there are no solutions offered by researchers in the small business tourism domain. One of the main barriers identified by this study is that SMTBs are usually unable to access Mode 1 knowledge unless there is a specific project provided for them and are therefore reliant on Mode 2 knowledge. While Mode 2 knowledge is useful it is often bounded by the nature of the locality and constrained by the normative position of the training or knowledge provider. Mode 2 also lacks the opportunity that Mode 1 can provide, as evidenced here, through 'knowledge spaces' where creativity and innovation are likely to occur when entrepreneurs are given the time and space to learn and ideate. Universities, that are successful in attracting project funding, are in a unique position to offer SMTBs the opportunity to meet and ideate over a prolonged period of time and in settings conducive to creating and sharing knowledge.

In applying empirically informed theory from outside the tourism sector, we have been able to address the isolation issues facing 'lonewolf' tourism entrepreneurs while trying to adopt DM. By utilising modes of knowledge acquisition theory (Cooper, 2006; Ruhanen, 2018) and a technology-in-practice perspective (Morgan-Thomas, 2016) we have been able to extrapolate critical insights, which further inform research in the adoption of DM by entrepreneurs, thereby contributing to the wider study of tourism SMTBs (Khalilzadeh & Wang, 2018; Pav-lovich, 2014).

6. Conclusion

Our paper addresses two questions: how can tourism business support agencies support entrepreneurs in acquiring the knowledge necessary to market effectively in the digital age? And, what theory can we draw upon, and contribute to, that will support the study of SMTBs' DM knowledge acquisition? To answer these questions, our study provides new insights and some principal resolutions to barriers associated with DM knowledge acquisition by SMTB entrepreneurs. Assumptions in prior studies imply that entrepreneurs are largely unwilling to adopt DM practices and that DMOs do not, or are unable to, provide sufficient support (McCamley & Gilmore, 2017). Our study finds that knowledge transference and adoption of complex new technologies for non-technology entrepreneurs requires a different type of engagement than simply training or mentorship programs. We argue that both Mode 1 and Mode 2 knowledge acquisition is equally necessary for successful knowledge acquisition and transfer to take place. Our study found that a 'one-size-fits' all approach to DM knowledge acquisition is highly inappropriate with SMTBs. This is because participant entrepreneurs have developed unique business models distinct to their own business ethos. Small business marketing and Mode 1 and Mode 2 theories assimilate well with technology-in-practice thinking, whereby relevance to the business is paramount to absorption, adaptation and embeddedness of that new knowledge (Morgan-Thomas, 2016). The findings here reveal the type of useful knowledge acquired and how it is acquired 'peer to peer' and within university-facilitated collaborative projects.

Our study contributes to the field of DM and tourism and builds on earlier studies in the small business and tourism sectors in developed economies (Alford & Page, 2015; Komppula, 2014; Thomas et al., 2011), and also elucidates methods for encouraging entrepreneurs to be more effectively engaged with DM in emerging economies (Elliott & Boshoff, 2007; Koens & Thomas, 2015). Our study carries important implications and opportunities for further research, which can inform SMTB policies to ensure that they effectively support the lone entrepreneur.

7. Future research

Entrepreneurs in these projects have shown their capacity for acquiring and sharing DM knowledge within university-facilitated projects, combining Mode 1 and Mode 2 knowledge and a technology-inpractice approach. Future research will explore how Mode 1 and Mode 2 knowledge can be more effectively transferred given the likely different entrepreneurial learning styles. Technology-in-practice theory provides a useful paradigm for future researchers who are studying the acquisition and sharing of digital marketing knowledge by tourism entrepreneurs and SMTBs.

Author contribution

Both authors made an equal contribution to the project and the writing of the paper.

Declaration of competing interest

None.

Acknowledgement

The authors acknowledge the grant from the Economic & Social Research Council (Grant Number: ES/J020990/1) that funded the first digital marketing project reported in this paper. Principal Investigators: Philip Alford, Alan Fyall; Co-Investigators: Dimitrios Buhalis, Stephen Page. The second project was funded by the Higher Education Innovation Fund (Principal Investigator: Philip Alford; Researchers: Rosalind Jones, Sally Wolfenden).

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