

# Are social media applications a facilitator or barrier to learning for tourism and hospitality management students?

Li Li

Bath Business School, Bath Spa University, Newton Park, Bath, United Kingdom

Email: [l.li2@bathspa.ac.uk](mailto:l.li2@bathspa.ac.uk)

This paper reports an exploratory investigation on the role of social media (SM) in Chinese university students' learning. Structuration theory was employed as the analytic framework to guide the discussion about the dynamics of the participants' behaviours and thoughts on their use of SM. The study reveals the struggles that the participants face, in that SM are perceived as convenient technology to connect to friends and family, to find information and share it with peers, to facilitate peer discussion, and to have some "leisure time". These positive perceptions are coupled with frustration and the "guilty" feeling of being distracted from formal university study. The study has implications for international education, particularly for institutions who are recipients of Chinese international students. The author argues that contemporary education should support an adaptive approach to facilitate students' learning by welcoming normative SM social interactions in formal and informal contexts. Educators should be open to technology-in-practice by students and introduce innovative teaching and learning practice that would convert the socio-cultural struggles of the students to positive drivers for their enhanced learning.

**Keywords:** social media, formal and informal learning, international education, structuration theory

## Introduction

Information communication technologies (ICT) have been widely adopted in educational institutions to facilitate student learning in English-speaking institutions and schools. Between 2009 and 2014, UK schools spent more than £1 billion on digital technologies such as interactive whiteboards and tablets (Nesta, 2014). In the higher education sector, Blackboard has become the most used institutional virtual learning system, followed by Moodle (UCISA, 2014). There are variations between institutions globally. For instance, most educational institutions in China have not had the privilege of extensive technology utilisation in teaching. Only a small proportion of Chinese universities subscribe to English online databases, such as EBSCO, for university students and academics. A few Chinese universities, such as the Dongbei University of Finance and Economics, are exploring open access systems like Moodle for delivering teaching programmes.

Along with the discourse of use of technology in teaching and learning, mobile technologies are at the top of the items most demanded by educational practitioners in higher education for lecture capture and other teaching-related supportive functions (UCISA, 2014). Mobile learning is widely deemed as an imperative direction for education (Churchill, Lu & Chiu, 2014). Various projects have been pursued to take advantage of the newly developed mobile technologies in the discourses of ubiquitous learning, flexible learning, social constructive learning and connective learning. There is an overall agreement that educational technologies hold promise in facilitating students' learning, but it has been argued that the true educational values of mobile technologies and applications are not yet fully understood or utilised. In spite of

the prevalence of SM applications on mobile devices such as mobile phones, iPads and tablets, there is not much research on the use of SM to facilitate informal learning in university studies.

In parallel with the growing use of technology in teaching and learning, the internationalisation of education is becoming more and more common globally. Universities in the UK have clearly been key education providers for international students (OECD, 2014). In the academic year 2014/2015, over 436 000 international students were enrolled to study in UK universities, among which over 312 000 were non-EU students (UKCISA, 2016). A number of UK universities have also developed collaborative partnerships with institutions in other countries to deliver their degree programmes. Surrey International Institute-DUFE, established in Dalian, China, in 2006 and University of Nottingham Ningbo, near Shanghai, are such international conventions. Students on sino-foreign educational projects study in China but they are registered with the partner UK institutions. Given the growing phenomenon of internationalisation of education, there is a need to understand how students from different socio-cultural backgrounds learn and how that learning is shaped by ICT.

Much attention has been given to the adoption and application of ICTs in educational institutions to enhance students learning (Corrin, Lockyer & Bennett, 2010; UCISA, 2014) and to increase the competitiveness of institutions under the movement of corporatisation of education (King & Boyatt, 2015). In that, university education in the UK is commercialised as such institutions face the challenge of being self-sustained. Understanding of ICT mediated learning in countries, such as China, is under-researched (Ma & Au, 2014). The focus of the present study is placed

on individual learning, in particular how Chinese university students who were studying a UK degree in International Tourism Management in China used their mobile phones in their daily lives, tapping into their views on the role of mobile applications in learning. Chinese netizens tend to be active participants of SM websites, but how SM is influencing the users, in particular the new generation of university students, has been rarely touched upon. Thus, this inquiry provides a gateway to discover how SM is forging the learning of the young generation who are exposed and challenged by international perspectives and demands. The paper aims to initiate further debates on the role of SM in shaping the learning experiences of university students.

## Theoretical framework

Research on learning design is dominated by the paradigm of dualism of structure whereby what is learned (e.g. learning content) and how to learn it (e.g. learning process) are often deemed to be interrelated components of the structure of learning and teaching whilst the context of learning is dealt with as a background to that learning. This paper has taken an alternative analytic approach to technology-facilitated learning, which employs Giddens's (1990) notion of duality of structure, to understand how university students' learning is shaped by the prevalence of SM usage. Following Giddens's modality framework, inherent factors of university students' technology-mediated learning are identified and discussed. In this, linguistic preferences and social-cultural beliefs are highlighted as key influential factors that drive the way that participants choose to engage, or not to engage, with SM, with other SM users, and with the content published on SM platforms. Their informed behaviour, attitudes and knowledge related to SM are a product of – as well as a means to further shape – their technology-mediated learning, which often blurs the boundary between the formal university curriculum and informal learning.

Giddens' structuration theory has been recognised as a vibrant analytic framework to unpack social conduct, such as management (Steward, 1989), human resource development (Veliquette, 2012), and education research (Viberg & Grönlund, 2015). The theory challenges the dualism of structure and argues that, in functionalism, structure and system are treated as separate entities and thus they tend to "dissolve into one another" (Giddens, 1979, p. 62). Giddens (1979) argues that patterns of social relationships only exist when the social system is organised and reproduced, and that structure resides within social practice, in this case SM-mediated learning. In other words, the theory argues that structure is a medium as well as an outcome of social conduct, thus pointing out the duality of structure. Modalities, which are collections of facilities, norms and interpretive schemes that link structure and system, are rules and resources that actors draw upon to produce a form of social conduct, which in turn also functions as a medium to reproduce that conduct. This is further explained in the following sections.

### **Facility: SM applications**

SM are generally considered as types of ICT applications that enable peer-to-peer communication and the building of user generated contents (UGC) to be shared in the public domain.

Kaplan and Haenlein (2010, p. 61) define SM as "a group of internet-based applications that build on the ideological and technological functions of Web 2.0, which allows the creation and exchange of User Generated Content". Cao (2011) and Levinson (2011) regard SM as "new new media", differing from "new media", e.g. email and online message boards, because SM gives freedom to the individuals to freely share ideas, experiences and information. As a result, collaborative construction of knowledge (Sigala and Chalkiti, 2014) becomes possible across different platforms. In so doing, SM nurtures bottom-up interactive content creation, which challenges the conventional communication approach of top-down control.

UGC on SM sites can be textual, graphic, and verbal information. Facebook, Twitter, Youtube, LinkedIn and Wikipedia, among many others, are widely adopted in the West, but due to political and socio-cultural reasons, some of these sites, such as Facebook and Youtube, are not accessible in China. However, similar SM sites are well perceived by the Chinese netizens. Table 1 outlines some of the examples.

According to China Internet Network Information Centre (CNNIC, 2016), China witnessed 668 million Internet users and 594 million mobile Internet users as of the end of June 2015. The source claims that 92% of the Internet users use instant messaging applications such as QQ and WeChat, and that 71% of them have used Blog. Micro-bloggers account for 31% of total netizens in China, among which 70% use Sina Weibo (CNNIC, 2016). Tobin (2010) reported that 40% of Chinese SM users create content, compared with 21% of American users who do so. According to Chen, Ding and Yu (2012), netizens in China's 60 biggest cities spend 70% of their leisure time online and create over 50% of all Internet content. Thus, it can be said that Chinese netizens are active users of SM.

### **Norms: ICT for learning and teaching**

Giddens (1979, 85) regards norm as "normative component of the rationalisation of action". The significant role of ICTs in learning and teaching has been firmly established in education practice and research. According to Dahlstrom (2012), over 60% of university students in sampled institutions in North America have smartphones and 40% of the university students use their smartphones for academic purposes, such as grade checking, course websites/online syllabi, and course/learning management systems. Likewise, a UK-based survey (Woodcock, Middleton & Nortcliffe, 2012) reported that 69% of sampled university students' own smartphones and that the students autonomously use smartphone technology to support their learning. Students in general consider that technologies can help with their academic study (Dahlstrom, 2012); however, students are largely unaware of the real potential of educational technology applications to support learning (Woodcock et

**Table 1:** Popular SM sites in China and the West

The type of SM	Chinese SM Sites	Western SM Sites
Blog	Sina Blog	Blogger
Instant messaging	QQ, WeChat	Messenger
Micro-blogging	Sina Weibo	Twitter
Social network	RenRen, Douban	Facebook
Video sharing	Youku	Youtube
Wikis	Baidu Baike	Wikipedia

al., 2012). A normative use of SM is to assist the marketing function of educational institutions through branding and engagement with prospective students (Bélanger, Bali & Longden, 2014). There is also an emerging trend of integrating mobile technologies, SM and learning design (Churchill et al., 2014). Some authors (Derkx & Bakker, 2013) assert that SM has revolutionised the way in which people connect, communicate and develop relationships, which is supported by McFarland and Ployhart (2015), who argue for scholarly guidance to provide principles and best practices to capitalise on the possible educational applications of SM.

Internet users use SM to upload photos, post blogs, update their status, share files and so forth. In their study, Chiu, Lin and Silverman (2012) reported that 21% of the participants had minimal participation on social media in China while 14% of them express their opinions and build large personal followings. In between are those who are enthusiastic about maintaining friendships, accounting for 15%, users who re-post original materials (15%) and readers who do not participate but read posts (14%). Such normative practice echoes the operationalisation of norms by Viberg and Grönlund (2016) and Halperin and Backhouse (2007), who analysed the norms of technology-in-practice in terms of the types of norms (participation and contribution), status (formal or informal), and sanction (strong or weak). SM users can largely be deemed as being participatory and/or active contributors. However, Kietzmann et al. (2011) go further by identifying seven building blocks of SM, namely identity, conversations, sharing, presence, relationships, reputation and groups. McFarland and Ployhart (2015) back up the dynamic nature of social interactions on SM sites by arguing that SM represents an extreme form of context that is very different from the non-digital context and some other forms of digital communication media that is based on Web 1.0 technology. The authors suggest eight discreet ambient stimuli of SM that are likely to directly influence the nature of relationships among cognitive, affective and behavioural constructs and processes, which are physicality, accessibility, latency, interdependences, synchronicity, permanence, verifiability and anonymity. Indeed, the study by Langan et al. (2015, 13) has reminded us of the complexity of personal use of SM in classroom: "They [the students] know they should be 'paying attention' but they are easily distracted by technologies that they see as integral to their existence. They are angry and frustrated for being distracted and feel hostile when people other than themselves cause distraction."

Around 43% of the netizens in China have accessed network literature primarily in Chinese (CNNIC, 2016). Students in China often access the Internet via their own laptops and/or mobile devices such as tablets and smartphones (CNNIC, 2016). Thus, it may be said that ICTs play a significant role in learning that is likely to be outside the educational institution's boundaries. Given the degree of adoption of mobile devices among university students, ubiquitous learning is seen as the inevitable trend in modern societies. Chen, Chang and Wang (2008) speak of use of mobile technologies to extend the use of pre-existing information systems and make learning materials accessible from anywhere and at any time. Churchill et al. (2014) state that mobile applications powered by social media can potentially enable new forms of learning platforms. In other words, mobile applications hold the promise of

ubiquitous social learning. However, this is open to debate. Problematic issues are the small screen sizes of mobile devices for reading pages of text, limited memories of the devices, short battery life and so forth (Woodcock et al., 2012). Traxler (2010) goes beyond the technical specifications of mobile technologies and questions the "true" value of mobile technologies in shaping learning. He argues that terms such as "spontaneous", "private", "portable", "situated", "informal", "bite-sized", "light-weight" and "context aware", which are associated with mobile learning, are often impressionistic.

In the theory of structuration, social interactions carry "double contingency", e.g. "the reactions of each party to a process of interaction depend upon the contingent responses of the other or others" (Giddens, 1979, 86). As such, the response of the other(s) is potentially a sanction upon the initial act and vice versa. The double contingency of interactions links to the normative institutionalisation of conduct as well as the actualisation of power. A good example of this is the leading SM sites such as Facebook and WeChat, which have increasing numbers of active users which legitimise these sites as leading SM applications, which in turn attracts more members. The digital technology industry in China continues to witness industry consolidation whereby small SM applications are being merged and/or acquired by larger players (Chiu et al., 2012). Thus it is logical to expect that the leading SM sites such as those outlined in Table 1 carry a strong sanction power in disseminating collective constructed knowledge and information. Indeed, Ledbetter and Finn (2016) speak of contesting relationships between professor and students who connect to SM to evaluate and expose the credibility of the professor as the subject expert in the classroom. Hence, SM not only provides a context for social interactions but also contributes to the base of rules and resources, forming a means to shape the reproduction of SM-mediated social interactions, which is what the duality of structure is all about.

### **Interpretive schemes: disciplines and ideologies**

Interpretive schemes are "standardized elements of stocks of knowledge, applied by actors in the production of interaction" (Giddens, 1979, 83), which are different from norms at the analytical level. Viberg and Grönlund (2016) and Halperin and Backhouse (2007) regard the type of learning (formal and informal) as an operationalising component of normative technology-in-practice. The author tends to disagree with such operationalisation because their approach is essentially tied into the doctrines of human learning which are a foundation of education as a discipline. As Tribe (2006, 366) points out, discipline is "a cornerstone of truth creation since its rules have been established and perfected over a long period with a view to underwriting the reliability and validity of research". Educational research draws heavily upon learning theories. Whichever stream of learning theories a researcher advocates, it directly shapes her/his understanding of technology-mediated learning and the resultant conclusion of pedagogical design. For example, Dennen and Hao (2014) discuss pedagogies for mobile learning in higher education that account for mobile technology-supported collaborative learning, and one can quickly find the root of this in social constructive learning theories (Bandura, 1977; Vygotsky, 1978). Garcia et al. (2015) investigate how blog practice can facilitate collectivist learning. Similarly, Brown, Czerniewicz and Noakes (2016) look at social

interactions of students on SM sites and argue that in the SM sphere connected learning can take various forms, including peer-supported, interest-driven, academically oriented, production-centred, shared purpose and openly networked. Therefore, the author argues that the operationalisation of SM-mediated learning should be conceptualised as interpretive schemes, in that human learning as a discipline of knowing is a foundation for understanding SM-mediated social conduct.

One interpretive scheme of technology-mediated learning is rooted in diffusion theory (Rogers, 2003). The theory advocates that an innovation has five characteristics as perceived by individuals, namely relative advantage, compatibility, complexity, trainability and observability, and that these perceived features can help explain the different rates of adoption. It is thus not a surprise to witness abundant studies that examine students' perceptions of the usefulness of digital technologies and the perceived values of technology for learning (Henderson, Selwyn & Aston, 2015; Tarhini, Hone & Liu, 2015). Henderson et al. (2015) report various distinct digital "benefits" as perceived by university students, such as flexibilities of time and place, ease of organising and managing study tasks, the ability to replay and revisit teaching materials and learn in more visual forms. Tahini et al. (2015) discuss the impact of social, organisational and individual factors on the intended acceptance of educational technology. Similarly, Delialioğlu and Alion (2015) reveal that availability, ease of use, collaboration and entertainment value are preferred features of m-learning applications. However, Crane, Benachour and Coulton (2011) raise the point of infrastructural and sociological boundaries to mobile learning, such as wireless connectivity and cost of downloading. Similarly, Dashtestani (2015) identifies barriers to the adoption of mobile devices for learning, such as reading from a small screen and the cost of having a smartphone and Internet connection. Nevertheless, the evaluations tend to focus on the technological aspects rather than the pedagogical benefits, such as increased engagement and skill enhancement (Welsh et al., 2015).

Overall, there is generally an assumption that the "appropriate" use of technologies would bring about enhanced learning. For example, Brill and Park (2008) argue that emerging technologies such as augmented reality, virtual reality and mobile technologies make ubiquitous learning and engaged learning possible. However, researchers struggle to find concrete evidence to prove this proposition (Beckman, Bennett, & Lockyer, 2014). Some authors have drawn upon these studies and concluded that despite the technological revolution, the nature of university teaching and learning remains unchanged (Henderson et al., 2015). For Langan et al. (2015) university teaching practice is lagging behind culturally. The authors point out that the traditional role of authority of teachers is increasingly challenged by Internet posting, surveillance technologies, neoliberalism and corporatisation of the higher education sector. This may mirror sociological boundaries that go beyond the technological aspects.

## Methodology

A focus group was employed to collect data. Seven participants were invited to the data collection process. They were

undergraduate students, in their early 20s, on dual-degree programmes at a sino-foreign institution located in China. One of them, at the time of data collection, was studying BSc (Hons) Business Management while the others were studying BSc (Hons) International Tourism Management. The first two years of the curriculum fall under the responsibility of the Chinese university, which is credited towards the UK university's qualification at Year 1 or the UK Higher Education Qualifications Framework level 4. The last two years of study fall under the responsibility of the UK institution, which are credited towards the Chinese university's qualification at Years 3 and 4. Successful students are issued degrees from both institutions. All the participants have come through China's national annual public matriculation and undergone a one-year English programme at the institution.

The participants were first invited to fill in a form that consisted of the questions that would establish their use of social media. Some of the questions were:

- How many years have you been using social media applications?
- What do you use social media for?
- What is your view on using social media via a laptop/desktop as opposed to doing so via a smartphone?

This was followed by a focus group interview conducted in English and audio-recorded. The author first explained to the participants what was considered as learning in this study. Learning is regarded as knowing something new and/or different, and/or being able to do something differently. Further, learning can take place within or outside a classroom setting. The participants were then invited to share their experiences of using SM. The interview lasted one hour and 50 minutes, and the recording was transcribed. Textual data were manually analysed by using thematic analysis.

## Findings and discussion

All the participants stated that they use SM applications from computers and their smartphones and that they use SM primarily for communication with other people, news and information search and leisure purposes. All of them are active users of WeChat and QQ, which mirrors the dominant usage of instant messaging applications in China (CNNIC, 2016). Two participants use a range of applications, such as Youku, RenRen, Weibo, Douban and Zhihu. Further, micro-blog (Sina Weibo) and social network sites (Douban and Zhihu) are the participants' favourite sites. The participants' accounts seem to suggest that they use SM to acquire UGC, which is contrary to Tobin's (2010) finding, who reported that 70% of Chinese netizens in big cities create content. However, one may argue that an action by a user such as labelling an article with "Like" or rating it is actually participatory in nature and is generating the type of contents that are sanctioned by the users. Such action is, from structuration theory's point of view, an outcome of the social interactions with SM and the users, as well as a means to shape the reproduction of social patterns. This is evident in this quote: "I read many articles from RenRen. I gave them a heart which means it is really good and I also send it to my friends if I feel it is really useful" (ZYJ). Her words mirror the norm of participation (e.g. "gave them a heart") and that of contribution in terms of expanding the reach of the articles through sending them to her friends. Her involvements

in SM support the normative technology-in-practice suggested by Viberg and Grönlund (2016) and Halperin and Backhouse (2007), which can be seen as participation, and contribution as the author also argues, in an informal manner with a certain level of sanction.

All the participants refer to SM sites as a useful and convenient "platform" for finding answers to their specific questions, such as "how to write a literature review". Some of them use Douban to learn foreign languages, such as Korean and Japanese. Interestingly, all the participants connect to IELTS Brother, which is a WeChat account of a person who is well known among those who aim to gain required IELTS (International English Language Test System) scores to study in British universities. Student WX explains the benefits: "He will tell you some skills ... for example, he may say if the examiner asks you 'do you like sports?' and most Chinese students will have a lot of information that they want to say but they don't know how to say it." ... "He said, if you meet [sic] this kind of question, firstly you need to answer like 'Yes, I do,' or 'No, I don't' and then tell the examiner that you like 'general sports' and then add your specific example ... to make it richer". During the group interview, a participant was invited to play a section of such a lesson on her mobile phone. It was interesting that the lesson was conducted in Chinese. It seems that the participants perceive such SM sources as a kind of strategy for improving IELTS scores and that they believe it is useful to have this type of knowledge introduced in their mother tongue. Littlewood (1999) distinguishes proactive autonomy and reactive autonomy. Such social constructive learning on the SM site is proactive autonomous learning, whereas the involvement of the students in the study of Gutierrez-Santiuste and Gallego-Arrufat (2015) is reactive autonomous in that the professors set the learning agenda and the students are expected to work on that agenda independently. Some scholars (Ho & Crookall, 1995; Littlewood, 1999) argue that due to socio-cultural characteristics, Chinese students can find it challenging to take an autonomous learning approach. However, the participants' experiences have unfolded a very different story – they are highly autonomous learners who have taken own learning beyond the formal setting of university programmes.

Likewise, the participants claim that they prefer using WeChat, rather than the discussion board on the university's virtual learning environment, to exchange ideas. Student LYX explains: "Our thinking is in Chinese so when we communicate in Chinese we can think quickly, more clearly". Participant CY adds: "It is very convenient and helpful in our discussion and sometimes we discuss the topic ... [that is] described [sic] very clearly so we can discuss it in our group." She maintains: "If both of us [groups] have the same topic, we can discuss this together". The participants believe that WeChat allows them to have peer-to-peer interactions whereby they "can talk again and again" (ZYJ). The student reveals: "This is a big problem because you are a teacher, and we are students. We can't let you do something ... we can't rely on the teachers speaking [sic] very slowly or very detailed". Her words suggest a socio-culturally expected normative interaction between a teacher and a student in a Confucian society, which gives great emphasis to the authoritative senior role of teachers and respect for teachers. Such beliefs, which could be probably related to the notion of power distance (Hofstede, 2001),

have shaped the participants' social interaction patterns with the lecturers and with fellow students. The participants have selected WeChat as their peer-to-peer communication platform to support and help each other. Such normative technology-in-practice may generate some clarification through virtual social constructive learning, as well as confusion due to inconsistent or even conflicting views. Participants from the same class state that in their group there are "professional students" who have asked the lecturer questions concerned with coursework and who share their understanding of the "answers" given: "They [professional students] will ask [you] questions, like Kevin. We believe him a lot ... [When] we have three groups of people ... who have asked you the same question and get three different answers. So we have conflicts between our answers" [laughs] (CY).

Thus, the author questions: Can SM enhance learning?

There is a mixed view of trust. Participant ZYJ says: "I don't know their identification ... I just think 'the article is really good!' and I choose to trust it". The article she refers to is available on the RenRen site and is written in Chinese on how to write a literature review. There is also literature on the topic available on the University's virtual learning environment (VLE) system, but she has chosen to follow the article on the SM site. She says: "It [the information on the VLE] was almost 'killing' me". Her words suggest the difficulty and/or frustration in understanding the know-how that was provided by the University that she was doing her degree with. She explains: "I think the answer [to her decision of trusting the article] is probably based on my values". Reflecting upon the participants' accounts regarding their preference in discussing ideas related to their academic studies in Chinese on WeChat, ZYJ's term of "values" suggests the fitness of knowledge with her framework of reference, e.g. the known values that have been built up through her upbringings, or habitus (Bourdieu, 1973), which are featured with Confucian values that guide the social interactions of Chinese people as discussed above. Therefore, habitus is influencing the normative practice with SM and with people on SM sites. However, to what extent is this way helping them adapt to the demands of their UK degree studies?

In ZYJ's case, her literature review was given a "very low mark" in her own words. In her reflection upon that experience, she says: "I trusted a wrong article ... It's written for Chinese people and the article [literature review] I wrote was for British people to read. The logics [of writing] are very different". The outcome of her writing may have been a negative experience for her, but that experience and the opportunity to talk about that experience have helped her think about SM and the contents from SM sites critically in that she realises that her established socio-cultural values have shaped her decision to subscribe to one set of statements over another. The output of her informal SM-mediated learning was measured as "a fail" by the university "rules" of assessment; however, such a "failure" has triggered a critical reflective learning experience for her. Arguably, in this case, SM has played a positive role in her learning if learning is deemed as a process of development and improvement.

As mentioned above, the participants use SM for leisure purposes, such as playing online games, watching a highly rated movie, finding a recipe to follow during holidays. They feel that they are connected to SM "most of the day" (ZJ) or

"every day, every hour, every minute" (QJW). Participant WX says: "I never turn off my phone, never, only if I am on the plane". This finding reminds us of the overall trends of Chinese netizens' online behaviour, namely that 70% of Chinese netizens spend 70% of their leisure time online (Chen, Ding & Yin, 2012) and that netizens in China spend on average 25.6 hours per week online for leisure (CNNIC, 2016). It is clear in the participants' accounts that staying online has become an integral part of their lifestyles, which has also resulted in some struggles. For instance, student WX says: "I know I should concentrate on the work but it's very hard for me because I think the social media has a heavy influence on my daily life and my work." Some participants express similar views that they feel SM distracts them from their "normal studies": "It [SM] brings a disadvantage in the normal studies because I cannot concentrate on my studies especially for the review, for the exams or the writing of an essay". The participants express that they always want to reach out for their mobile phones to check what is happening in their virtual social networks. They feel "angry" and frustrated with their own behaviour, which reminds us of a similar story reported in Langan et al. (2015). The students in the present study have developed their own ways of "gaining back some control" such as putting the phone under the duvet cover or in a mobile phone pocket. Their words clearly denote that SM is distracting them from their formal learning. However, it is also evident that they are critical about their way of handling the demands of formal learning and their needs to be social and to relax. Such self-directed reflection and self-discipline of actions are no doubt personal developments that formal studies do not normally facilitate.

## Conclusion

As emerged from the data, the interpretive schemes of social interactions with SM and with the users of SM are concerned with (1) perceived benefits, (2) socio-cultural compatibility in terms of normative social interactions, and (3) "time-sharing" between formal study and entertainment sought via SM. A conclusion may be drawn that SM certainly provides more opportunities for social constructive learning that brings along more collaboration and clarification as well as more conflicts and confusion, which hopefully would initiate a contingent process of "finding out" and reflective thinking. Further, SM may have caused distractions from "formal studies" for the participants but it has also allowed them to take leadership of their own personal development and to develop critical reflective thinking about themselves and about the views expressed by other people on SM. It is important that educators should recognise and welcome learning opportunities facilitated by SM. For example, one may encourage the students' use of their mobile phones to identify a blog that is relevant to the topic of lecture and allow open discussion on the content. In that discussion, critical reasoning may be demonstrated in the class. One challenge for educators would be to overcome the ideology of being the "knowledge authority". The challenge for students would be to overcome the ontological assumption that there is a fixed answer to a question. The challenge for both educators and students would be to negotiate mutually accepted normative SM-mediated interaction patterns that agree with personal needs, habitus and institutionalised values.

Furthermore, the research has discovered that the informal learning gained through SM engagement goes hand in hand with formal university learning. However, the contribution of informal learning towards formal learning is not always fully recognised and assessed, which in turn raises the issue of how to capture this "hidden" learning and thus facilitate it. The challenge at the university level would be to recognise, at the assessment policy level, the intertwining of informal and formal learning in societies that are now featured by SM interactions experienced by university students. The theoretical implication for educational research is that duality of structure, as an alternative underpinning analytic framework, may provide a fruitful pathway for the research field of design for learning.

**Acknowledgements** — I thank the Surrey International Institute – DUFE, University of Surrey, for permission to conduct the research, and the University of Derby for the support that made the writing up of this research possible.

## References

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Beckman, K., Bennett, S., & Lockyer, L. (2014). Understanding students' use and value of technology for learning. *Learning, Media and Technology*, 39(3), 346–367. <http://dx.doi.org/10.1080/17439884.2013.878353>
- Bélanger, C. H., Bali, S., & Longden, B. (2014). How Canadian universities use social media to brand themselves. *Tertiary Education and Management*, 20(1), 14–29. <http://dx.doi.org/10.1080/13583883.2013.852237>
- Bourdieu, P. (1973). Cultural reproduction and social reproduction. In R. Brown (Ed.), *Knowledge, education and cultural change: Papers in the sociology of education*. (pp. 71–112). London: Tavistock Publications.
- Brill, J. M., & Park, Y. (2008). Facilitating engaged learning in the interaction age – Taking a pedagogically-disciplined approach to innovation with emergent technologies. *International Journal on Teaching and Learning in Higher Education*, 20(1), 70–78.
- Brown, C., Czerniewicz, L., & Noakes, T. (2016). Online content creation: Looking at students' social media practices through a connected learning lens. *Learning, Media and Technology*, 41(1), 140–159. <http://dx.doi.org/10.1080/17439884.2015.1107097>
- Cao, B. L. (2011). Social media: Definition, history of development, features and future – The ambiguous cognition of social media. *Journal of Human Radio & Television University*, 47(3), 65–69.
- Chen, G. D., Chang, C. K., & Wang, C. Y. (2008). Ubiquitous learning websites: Scaffold learners by mobile devices with information aware techniques. *Computers & Education*, 50(1), 77–90. <http://dx.doi.org/10.1016/j.compedu.2006.03.004>
- Chen, Y., Ding, X. & Yu, L. (2012). Research on the priority of China's internet development. *Physics Procedia*. International Conference on Applied Physics and Industrial Engineering, 24(C), 1595–1600.
- China Internet Network Information Centre (CNNIC). (2016). The 36th statistical report on internet development in China. <http://www1.cnnic.cn/IDR/ReportDownloads/201601/P020160106496544403584.pdf>
- Chiu, C., Lin, D., & Silverman, A. (2012). *China's social-media boom*. New York: McKinsey & Company.
- Churchill, D., Lu, J., & Chiu, T. K. F. (2014). Integrating mobile technologies, social media and learning design. *Educational Media International*, 51(3), 163–165. <http://dx.doi.org/10.1080/09523987.2014.969895>

- Corrin, L., Lockyer, L., & Bennett, S. (2010). Technological diversity: An investigation of students' technology use in everyday life and academic study. *Learning, Media and Technology*, 35(4), 387–401. <http://dx.doi.org/10.1080/17439884.2010.531024>
- Crane, L., Benachour, P., & Coulton, P. (2011). Virtual learning environments for mobile learning: Constrained by infrastructural and sociological boundaries? *Innovation in Teaching and Learning in Information and Computer Sciences*, 10(1), 12–21. <http://dx.doi.org/10.1120/ital.2011.10010012>
- Dahlstrom, E. (2012). *ECAR study of undergraduate students and information technology*. Louisville, CO: Educause Center for Applied Research.
- Dashtestani, R. (2015). Moving bravely towards mobile learning: Iranian students' use of mobile devices for learning English as a foreign language. *Computer Assisted Language Learning*. <http://dx.doi.org/10.1080/09588221.2015.1069360>
- Delialioğlu, Ö., & Alioon, Y. (2015). The effect of students' subject discipline on their m-learning application preferences. *Interactive Learning Environments*. <http://dx.doi.org/10.1080/10494820.2015.1070273>
- Derkx, D., & Bakker, A. (Eds.). (2013). *The psychology of digital media at work*. Hove: Psychology Press.
- Dennen, V. P., & Hao, S. (2014). Intentionally mobile pedagogy: The M-COPE framework for mobile learning in higher education. *Technology, Pedagogy and Education*, 23(3), 397–419. <http://dx.doi.org/10.1080/1475939X.2014.943278>
- Garcia, E., Elbeltagi, I., Brown, M., & Dungay, K. (2015). The implications of a connectives learning blog model and the changing role of teaching and learning. *British Journal of Educational Technology*, 46(4), 877–894. <http://dx.doi.org/10.1111/bjet.12184>
- Giddens, A. (1979). *Central problems in social theory: Action, structure and contradiction in social analysis*. London: The Macmillan Press. <http://dx.doi.org/10.1007/978-1-349-16161-4>
- Giddens, A. (1990). *The consequences of modernity*. Cambridge: Polity Press in Association with Blackwell.
- Gutiérrez-Santiuste, E., & Gallego-Arrufat, M. (2015). Internal structure of virtual communications in communities of inquiry in higher education: Phases, evolution and participants' satisfaction. *British Journal of Educational Technology*, 46(6), 1295–1311. <http://dx.doi.org/10.1111/bjet.12218>
- Halperin, R. & Backhouse, J. (2007). Using structuration theory in IS research: Operationalizing key constructs. In *Proceedings of the 28th International Conference on Information Systems*, Montreal, Canada. <http://aisel.aisnet.org/icsis2007/127/>
- Henderson, M., Selwyn, N., & Aston, R. (2015). What works and why? Student perceptions of "useful" digital technology in university teaching and learning. *Studies in Higher Education*, 1–13. <http://dx.doi.org/10.1080/03075079.2015.1007946>
- Ho, J., & Crookall, D. (1995). Breaking with Chinese cultural traditions: Learner autonomy in English language teaching. *System*, 23(2), 235–243. [http://dx.doi.org/10.1016/0346-251X\(95\)00011-8](http://dx.doi.org/10.1016/0346-251X(95)00011-8)
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68. <http://dx.doi.org/10.1016/j.bushor.2009.09.003>
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241–251. <http://dx.doi.org/10.1016/j.bushor.2011.01.005>
- King, E., & Boyatt, R. (2015). Exploring factors that influence adoption of e-learning within higher education. *British Journal of Educational Technology*, 46(6), 1272–1280. <http://dx.doi.org/10.1111/bjet.12195>
- Langan, D., Scott, N., Wykes, T., Szeto, J., Kolpin, S., Lopes, C., & Smith, N. (2015). Students' use of personal technologies in the university classroom: Analysing the perceptions of the digital generation. *Technology, Pedagogy and Education*. <http://dx.doi.org/10.1080/1475939X.2015.1120684>
- Ledbetter, A. M., & Finn, A. N. (2016). Why do students use mobile technology for social purposes during class? Modelling teacher credibility, learner empowerment, and online communication attitude as predictors. *Communication Education*, 65(1), 1–23. <http://dx.doi.org/10.1080/03634523.2015.1064145>
- Levinson, P. (2011). *New new media*. Shanghai: Fudan University Press.
- Littlewood, W. (1999). Defining and developing autonomy in East Asian contexts. *Applied Linguistics*, 20(1), 71–94. <http://dx.doi.org/10.1093/applin/20.1.71>
- Ma, C., & Au, N. (2014). Social media and learning enhancement among Chinese hospitality and tourism students: A case study on the utilisation of Tencent QQ. *Journal of Teaching in Travel & Tourism*, 14(3), 217–239. <http://dx.doi.org/10.1080/15313220.2014.932483>
- McFarland, L. A., & Ployhart, R. E. (2015). Social media: A contextual framework to guide research and practice / integrative conceptual review. *The Journal of Applied Psychology*, 100(6), 1653–1677. <http://dx.doi.org/10.1037/a0039244>
- Nesta. (2014). Innovation in education. <http://www.nesta.org.uk/blog/innovation-education?gclid=CInUrIT79soCFRDhGwodeHkNvQ>
- Organisation for Economic Co-operation and Development (OECD). (2014). *Education at a glance 2014: OECD Indicators*. The Organisation for Economic Co-operation and Development. <http://www.oecd.org/about/publishing/at-a-glance.htm>
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press.
- Sigala, M., & Chalkiti, K. (2014). Investigating the exploitation of web 2.0 for knowledge management in the Greek tourism industry: An utilisation-importance analysis. *Computers in Human Behavior*, 30, 800–812. <http://dx.doi.org/10.1016/j.chb.2013.05.032>
- Stewart, R. (1989). Studies of managerial jobs and behaviour: The way forward. *Journal of Management Studies*, 26(1), 1–10. <http://dx.doi.org/10.1111/j.1467-6486.1989.tb00713.x>
- Tarhini, A., Hone, K., & Liu, X. (2015). A cross-cultural examination of the impact of social, organisational and individual factors on educational technology acceptance between British and Lebanese university students. *British Journal of Educational Technology*, 46(4), 739–755. <http://dx.doi.org/10.1111/bjet.12169>
- Tobin, J. (2010). Social media and China: It's not what you think: Notes from SxSW. Ignite Social Media Blog. <http://www.ignitesocialmedia.com/conferences/social-media-and-china-its-not-what-you-think-notes-from-sxsw/>
- Traxler, J. (2010). Will student devices deliver innovation, inclusion, and transformation? *Journal of the Research Centre for Educational Technology*, 6(1), 3–15.
- Tribe, J. (2006). The truth about tourism. *Annals of Tourism Research*, 33(2), 360–381. <http://dx.doi.org/10.1016/j.annals.2005.11.001>
- UK Council for International Student Affairs (UKCISA). (2016). International students in UK. HE - international student statistics: UK higher education. [http://institutions.ukcisa.org.uk/Info-for-universities-colleges--schools/Policy-research--statistics/Research--statistics/International-students-in-UK-HE/#International-\(non-UK\)-students-in-UK-HE-in-2014-15](http://institutions.ukcisa.org.uk/Info-for-universities-colleges--schools/Policy-research--statistics/Research--statistics/International-students-in-UK-HE/#International-(non-UK)-students-in-UK-HE-in-2014-15)
- Universities and Colleges Information Systems Association (UCISA). (2014). 2014 survey of technology enhanced learning for higher education in the UK. <http://www.ucisa.ac.uk>
- Veliquette, A. J. (2012). Structuration theory's relevance to HRD: A review and application. *Human Resource Development Review*, XX, 1–21.
- Viberg, O., & Grönlund, Å. (2015). Understanding students' learning practices: Challenges for design and integration mobile technology into distance education. *Learning, Media and Technology*, 1–21. <http://dx.doi.org/10.1080/17439884.2016.1088869>

- Vygotsky, L. S. (1978). *Mind in society*. London: Harvard University Press.
- Welsh, K. E., Mauchline, A. L., Powell, V., France, D., Park, J. R., & Whalley, B. (2015). Student perceptions of iPads as mobile learning devices for fieldwork. *Journal of Geography in Higher Education*, 39(3), 450–469. <http://dx.doi.org/10.1080/03098265.2015.1066315>
- Woodcock, B., Middleton, A., & Nortcliffe, A. (2012). Considering the smartphone learner: An investigation into student interest in the use of personal technology to enhance their learning. *Student Engagement and Experience Journal*, 1(1), 1–15. <http://dx.doi.org/10.7190/seej.v1i1.38>