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The use of social media platforms in a first year accounting course

An exploratory study

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Abstract

Purpose – The purpose of this exploratory study is to describe the use of social media platforms in a first-year accounting course at a South African university and provide evidence on whether students found these social networking sites useful.

Design/methodology/approach – The study uses survey research to determine students' usage of two social media platforms (Facebook and Twitter) and their perceptions of these platforms' usefulness in a first-year accounting course.

Findings – The study found that the time spent on the two social media platforms does not detract from the time spent on preparation for the first-year accounting course. Students' perceptions on the usefulness of these platforms showed support by all students for using social media to provide career information, but not all students perceived the platforms to be useful for communication and teaching and learning. While no statistically significant differences were found in the students' responses based on gender, a number of statistically significant differences were found when the results were analysed according to language. Students whose home language was not English found the two social media platforms more useful for some aspects of communication, teaching and learning and for career guidance than English-speaking students.

Research limitations/implications – The questionnaire was only administered to students on one campus who had actually accessed the social media platforms. Therefore, the results are not generalisable beyond this study.

Practical implications – The study shows that students whose home language is not English perceived the platforms more useful for communication, some teaching and learning aspects and for career guidance in a first-year accounting course. This may be helpful to other accounting teachers faced with student disruptions, large classes or high numbers of international students whose first language is not English, and who need to communicate with all their students.

Originality/value – The study adds to the discourse on the usefulness of social media platforms in a tertiary education setting, and more particularly, in a first-year accounting course in South Africa.

Keywords Social media, Facebook, Twitter, Accounting education

Paper type Research paper



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1. Introduction

At a South African university[1], the official online platform for communicating with students is Moodle. Each course co-ordinator uploads copies of lecture slides, additional notes, class examples and tutorial solutions, as well as past papers and various notices. Only students with valid, registered student numbers and individual passwords can



access the courses for which they are registered. This tool can also be used to send e-mails to students. However, this website is quite difficult to operate from a mobile phone unlike social media platforms such as Facebook and Twitter. These platforms have been developed to be used in "application form" or on a simple "mobile site" tailored to the user's cell phone. In April 2013, student protests over fees and exclusions disrupted the academic programme and the university brought forward the vacation period so as to resolve matters without any further disruptions to the academic programme. Because of the diverse geographical locations of students, a concern arose about the delivery of messages to the students and how assistance could be offered during this time. A test had to be re-scheduled to be written immediately after the student vacation, leaving little opportunity for students to clarify any issues or difficulties relating to their academic work. As some students were from disadvantaged backgrounds and did not have the newer cell phones that could receive e-mails and did not have any access to a computer with an internet connection to check e-mails, a Facebook page named "Accounting 1 – University X 2013" was created. Older cell phones can access the Facebook mobile site and are able to perform all the necessary and relevant functions that Facebook offers at a basic level. A notice was sent to all students via e-mail using Moodle to inform them of this development, and, in addition, a PC link and a mobile link to the Facebook page was placed on Moodle.

Subsequently, students wrote on the "wall", asked various questions and debated possible solutions using the Facebook platform. The platform not only provided answers to students but also prompted them with questions that would lead to them developing the correct answer on their own. Thus, the Facebook platform, which initially started as a means of communicating with students became, over time, a platform where a lively dialogue began to develop, and where teaching and learning could take place. While Moodle does have a chat room, students do not use it, as they need access to a computer to log in, or possibly they do not know how to use it.

A few first-year English-speaking accounting students asked if a Twitter account could be set up too. Once the Twitter account was set up, the Facebook page was linked to the Twitter account (@ACCTUniversityX) so all notices and statuses placed on Facebook would automatically send the same message via the Twitter account. The link to the Twitter account was also placed on Moodle.

A further use of Facebook was to meet the students' requests for information about being a Chartered Accountant (CA), what CAs were talking about in practice and how this related to their studies. Links and information were then provided to the South African Institute of Chartered Accountants' (SAICA) website, the SAICA student website (NowiCAn) and to the *Accountancy SA* magazine. This information was also placed on Moodle.

Reviews of published literature (Hew, 2011; Manca and Ranieri, 2013; Tess, 2013) on social media platforms show some gaps regarding the usefulness of these platforms for communication and teaching and learning. Hew (2011, p. 668) comments that there is only limited evidence to support the effectiveness of Facebook, and that Facebook has little educational value. Manca and Ranieri (2013) conducted a similar literature review to that of Hew (2011) using a different sample of articles. Manca and Ranieri (2013, p. 487) indicate that the educational value of Facebook has not been entirely determined, and that the results from mainstream educational models are contradictory with "some scholars emphasizing its pedagogical affordances [...] and others cautioning against its



use for educational purposes". Manca and Ranieri (2013, p. 487) also note that "systematic reviews about documented educational usage of Facebook as a learning environment are lacking". Guy's (2012) literature review on the broader topic of social media concluded that "social media holds promise for academia", but that there is an ongoing debate concerning its role in education. Tess (2013) reviewed the literature on the role of social media in higher education classes: real and virtual. His study found Facebook to be the most widely investigated social networking site as an instructional tool. He concludes that "the jury is still out" on whether social networking sites should be integrated into the higher education classroom, and that because of the newness of social networking, researchers have now only begun a thoughtful research agenda (Tess, 2013, p. A66).

Relevant South African research is by Bosch (2009) and Ivala and Gachago (2012). Bosch (2009) interviewed 50 undergraduate students and five lecturers at the University of Cape Town (UCT) currently engaging with each other using Facebook. Her research explored the use of Facebook qualitatively. Bosch (2009) found positive benefits to teaching and learning using Facebook, with the main benefit seen by students as being able to "access tutors and lecturers instantly, in an informal and less pressured online environment" (Bosch, 2009, p. 195), Although Bosch (2009) examined the profiles (demographics) of the Facebook users, gender or language differences were not investigated with regards to the usefulness of Facebook. Ivala and Gachago (2012) investigated the use of Facebook and blogs at the Cape Peninsula University of Technology as a means for enhancing students' levels of engagement in learning. This qualitative study used focus group interviews with three lecturers and approximately 36 students. They found that Facebook had the potential to enhance student engagement in learning (Ivala and Gachago, 2012, p. 163), Ivala and Gachago (2012) did not report on any gender and language differences in their samples. This current study uses a much larger sample of students in a focused setting using a quantitative research methodology. Furthermore, although there is much literature on the use of social media in education, not many studies have investigated the use of social media in an accounting environment and no studies have examined their use using a questionnaire survey in a first-year accounting course in South Africa. In addition, the literature reviews (Hew, 2011; Manca and Ranieri, 2013; Tess, 2013) already discussed show that more research is needed in this area.

The objective of this paper is to describe the use of two social media platforms (Facebook and Twitter) in a first-year accounting course in South Africa and presents the results of a survey of first-year accounting students'[2] perceptions of the usefulness of the platforms using both a gender and language analysis. In so doing, the paper contributes to the existing literature on the use of social media platforms by using a different cohort of students (first-year accounting students), and provides evidence on these platforms' use on both a gender and language basis in South Africa.

The article is organized as follows: Section 2 presents the literature review. The literature review first discusses the concept of engagement as the theoretical framework, and thereafter, relevant empirical research. The research method is explained in Section 3. Section 4 presents the results and discussion. Finally, the main findings of the study, limitations of the research and areas for further research are presented in the conclusion in Section 5.

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Use of social

2. Literature review

2.1 Theoretical framework

Buzzetto-More (2012, p. 68) provides a number of learning theories supported by social networking. These are social learning theory, constructivism, learning available on demand, authentic learning, student-centred learning, student engagement, digital literacy and media richness and sensory complexity. This current study has focused on the use of social networking sites as a communication channel and its use for teaching and learning, thus providing an opportunity to engage with the students. Roblyer *et al.* (2010, p. 137) note that social networks sites' growing popularity indicates that "providing additional avenues and purposes for communications among students and faculty", can contribute to successful learning, and that instructors could increase the overall quality of engagement in an instructional setting, creating a more effective learning environment.

Astin (1984) is credited with introducing the concept of engagement to education literature. Astin (1984, p. 297) defined engagement as "the amount of physical and psychological energy that the student devotes to the academic experience". His theory of student engagement was based on five tenets, which Junco (2012a) relates to student use and involvement with Facebook as follows:

- (1) "Engagement refers to the investment of physical and psychological energy" in the academic experience (Junco, 2012a, p. 164). Junco (2012a, p. 164) explains that students invest much psychological energy in using Facebook which is indicated by the usage statistics.
- (2) "Engagement occurs along a continuum" (Junco, 2012a, p. 164). This relates to the amount of time that a student spends on Facebook, some students spending a lot of time, and others no time at all.
- (3) "Engagement has both quantitative and qualitative features" (Junco, 2012a, p. 164). The amount of time spent using Facebook is a quantitative feature, but engaging in different activities are qualitative features.
- (4) "The amount of student learning and development associated with an educational program is directly related to the quality and quantity of student engagement in that program" (Junco, 2012a, p. 164). Facebook use may relate to student engagement, and thus to student development and learning.
- (5) "The effectiveness of any educational practice is directly related to the ability of that practice to increase student engagement" (Junco, 2012a, p. 164). Assuming that Facebook increases a student's engagement, this platform could be used in educationally relevant ways to increase student academic outcomes (Junco, 2012a, p. 164).

Junco (2012a, p. 169), using a sample of college students in the USA, and measuring engagement by using a 19-item National Survey of Student Engagement (NSSE) scale, found time spent on Facebook both positively and negatively related to engagement (i.e. some activities were predictive of engagement and some were not), and that specific Facebook activities are related to engagement. Furthermore, "Facebook activities are stronger predictors of student engagement, time spent preparing for class, and time spent in co-curricular activities than time spent on Facebook" (Junco, 2012a, p. 169).



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This current study accepts Junco's (2012a) notion of engagement as engaging with students via an informal platform such as Facebook and Twitter to facilitate communication and teaching and learning. Although the social media platforms were initially set up to facilitate communication when student protests unexpectedly closed the university, the platforms were not discontinued when the protests ceased. They have moved from their initial beginning as a communication tool to one where engagement with students could occur. When subsequent student protests arose, the platforms were already in place and were operational.

2.2 Empirical research

2.2.1 Facebook usage. According to Kuh (2009, p. 683):

[...] student engagement represents the time and effort students devote to activities that are empirically linked to desired outcomes of college *and* what institutions do to induce students to participate in these activities.

Kuh (2009, pp. 684, 686) notes that almost every reform report since 1984 has emphasized the important link between student engagement and the desired outcomes of college. Kuh (2009, p. 698) argues that engagement "helps to level the playing field, especially for students from low-income family backgrounds and others who are historically underserved". Several studies collect data on the amount of time students are devoting to Facebook (Madge et al., 2009; Kirschner and Karpinski, 2010; Mazman and Usluel, 2010; Hew, 2011; Gafni and Deri, 2012; Junco, 2012b; Mok, 2012; Gabre and Kumar, 2012; Arquero and Romero-Frías, 2013; Arteaga Sánchez et al., 2014) or social networking sites (Hargittai, 2007). Some of these studies (Mazman and Usluel, 2010; Hew, 2011; Mok, 2012; Arquero and Romero-Frías, 2013) only documented the time students were spending on Facebook, For instance, Mazman and Usluel (2010) found university students in Turkey were spending about 15-30 min a day on Facebook, with most students logging onto the site at least once a day; Hew (2011, p. 667) found that overall, previous research found that students spend mostly between 10 and 60 min on Facebook daily, and that students were doing so to maintain existing links with known contacts. Mok (2012), in his study on business students at a Singaporean university, found 91.7 per cent of students went online daily, of whom 41.7 per cent spent at least 16 h a week online, and 83 per cent used Facebook as their primary social networking site; and Arteaga Sánchez et al. (2014) found that most participants (76 per cent) were using Facebook several times a day.

Other studies (Kirschner and Karpinski, 2010; Madge *et al.*, 2009) found that Facebook usage was negatively impacting students in various ways. Kirschner and Karpinski's (2010) study examined Facebook use and its relation to academic performance arguing that Facebook is time-consuming. Their study found that Facebook users reported having a lower grade point average (GPA) and spent fewer hours studying per week than non-Facebook users, although the majority of students claimed that Facebook usage did not have an impact on their academic performance. Students also reported that they used their accounts daily or multiple times per day. Madge *et al.* (2009) found that British students' time spent on Facebook was to the detriment of that available for formal academic purposes. Gafni and Deri (2012), in their Israeli study set in four different academic institutions using electrical engineering students, found that the time resource of students was negatively affected by Facebook

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usage. Gabre and Kumar (2012), who examined the effects of perceived stress and Facebook on accounting students' academic performance, found that after controlling for stress, accounting students who use Facebook while studying, experience lower academic performance. As a result, Gabre and Kumar (2012) advise educators to make students aware of this distractive activity or alternatively, use it as an alternative teaching tool so as to benefit students.

On the other hand, studies have found that Facebook use has a positive impact on students. Junco (2012b) investigated, *inter alia*, the time spent on Facebook and grades and preparing for class in the USA. Relevant to this study in the finding that time spent on Facebook was negatively related to time spent preparing for class. Furthermore, this relationship was weak after including Facebook activities (Junco, 2012b, p. 195). The study also found that Facebook checking was not related to time spent preparing for class. Junco (2012b) concludes that using Facebook as such is not detrimental to an academic outcome or to a task outcome (such as preparation). Arquero and Romero-Frías (2013) found most students (87 per cent) were accessing the internet daily. Although their study is silent as to which social networking site they used for their project-based intervention, they concluded that the experience was positively valued by the students, that the social networking site used in the experience was a good learning tool, that it allowed them to use useful tools to be life-long learners, and that it was useful for content learning.

Hargittai (2007, p. 5) found students were spending about 15.5 h a week on the Web and went online several times a day. However, the focus of the Hargittai (2007) study was on the differences in users and non-users of social network sites.

The above discussion shows differing results. Clearly in some instances, the studies showed an adverse effect on grades or time resources, yet in other instances, Facebook checking was not detrimental to preparation time, and there is the possibility that the time spent on Facebook had some positive outcomes for students. Nevertheless, it can be noted that the time spent by students on on-line activities ranges from 1 h a week (Hew, 2011) to 16 h a week (Mok, 2012).

2.2.2 Usefulness of social media platforms. Studies have also examined the use of Facebook as a device that aids communication and teaching and learning (Bosch, 2009; Madge et al., 2009; Delaney et al., 2010; Mazman and Usluel, 2010; Roblyer et al., 2010; Junco et al., 2011; Ivala and Gachago, 2012; Mok, 2012; Irwin et al., 2012; Arquero and Romero-Frías, 2013; Arteaga Sánchez et al., 2014). Bosch (2009) found positive communication benefits in the usage of Facebook at UCT. Students found it easier to be able to check class-related material, and that their Facebook friends helped them find relevant material on the internet and answer questions about course logistics. In addition, during vacation time, they could connect with others. The main benefit of Facebook found by all students was that they could network with senior students and were able to access tutors and lecturers immediately in a less formal and less pressured online environment (Bosch, 2009, p. 195), Bosch (2009, p. 195) also found that students used Facebook friends to help them find learning material on the internet, and share lecture and study notes. Students were also able to learn from older students without the need for face-to-face contact and allowed them to interact with other students with similar academic interests.

Delaney et al. (2010) report the results of using computer-based on-line learning together with an integrated workshop-style tutorial and lecture in a first-year



accounting course in an Australian university. Their results showed that the students saw the approach in a positive way and that it had a constructive effect on the students' learning experience. They also found that Facebook was used frequently while Twitter was rarely used. In contrast, Junco *et al.* (2011) found the use of Twitter in educationally relevant ways can increase student engagement and improve grades. Mazman and Usluel (2010), taking a different approach, modelled the educational usage of Facebook. A finding of their model is that educational use of Facebook "has a significant positive relationship with its use for communication, collaboration and resources or material sharing" (Mazman and Usluel, 2010, p. 451). Roblyer *et al.* (2010), using a questionnaire survey at a university in the USA, found that students were more likely to use Facebook than academic staff members and that students were more open to using Facebook or similar platforms to support the learning environment. This supported the notion that using Facebook in education would be convenient (Roblyer *et al.*, 2010, p. 138).

Ivala and Gachago (2012) used interviews with lecturers and students, as well as the analysis of Facebook walls and blog postings, for their study. Their main findings indicated that all the lecturers were using Facebook groups and class blogs to supplement contact teaching (2012, p. 157). In one instance, a lecturer had integrated Facebook into a formal learning activity. This lecturer felt that the Facebook group benefitted from teaching and learning, as this acted as an information repository and improved communication, while the students indicated that they received moral and academic support (Ivala and Gachago, 2012, p. 160).

Mok's (2012) study used a Facebook component to a business communication course and asked students to rate their learning experience when using this component, and why do they use Facebook for learning. Students (71 per cent) found it a good communication tool and most (93.7 per cent) felt they had "picked up useful learning points" (Mok, 2012).

Irwin *et al.*'s 2012 study in Australia on students' perceptions of using Facebook pages within four university courses found that while most students (78 per cent) were of the opinion initially that a Facebook page would facilitate their learning, a second questionnaire found that only 51 per cent stated that it was an effective learning tool. However, the majority of students (76.4 per cent) recommended its use for future courses. Although the study did not identify the nature of the four university courses, the researchers conclude that the students use Facebook and that the students perceive benefits in improved communication and interaction, but that it was unclear as to whether Facebook enhanced the students' learning outcomes (Irwin *et al.*, 2012, p. 1230).

Arquero and Romero-Frías (2013) focused on the use of social networking sites more generally rather than just on the use of Facebook. Their study found that the use of a social networking site in a project in an International Accounting course was positively valued by students, and that the social networking site was a good learning tool which could improve the quality of learning, helping them keep up-to-date in a lifelong learning context. It was also viewed as useful for content learning. Students more actively involved in the experience tended to obtain higher grades.

Arteaga Sánchez *et al.* (2014) found that communication, collaboration and resource/material sharing have a positive effect on the educational use of Facebook. Their study, which used a structural equation model specifically designed to identify the factors that may motivate students to adopt and use social network tools for educational purposes, found that "Facebook Adoption has a significant positive effect on the Purposes of

Facebook Usage; and Purposes of Facebook Usage has a significant positive effect on the Educational Usage of Facebook" (Arteaga Sánchez *et al.*, 2014, p. 145). The majority of their students (89.3 per cent) stated that they would not mind using Facebook as a learning tool, they (78 per cent) believed it to be a useful resource and they (71 per cent) could use it to communicate with classmates.

Deng and Tavares (2015) found that despite setting up a module website on Moodle for student teachers, students not only set up an alternative website but also used a Facebook group for communication and sharing. Moodle was considered a "one-way system serving academic purposes only" (Deng and Tavares, 2015, p. 322). The alternative website served as a platform to exchange resources and share teaching ideas, while Facebook was used for communicating, "discussion and sharing on a variety of topics" (Deng and Tavares, 2015, p. 322).

Contrary to the evidence above, Madge *et al.* (2009) found that almost half of the undergraduate students were using Facebook in an informal way for educational networking, but that Facebook was considered more important for social reasons rather than for formal teaching purposes.

Research (Hargittai, 2007, Bosch, 2009; Junco, 2012a) on language and gender differences with regards to social media platforms did so in response to the "digital divide". Junco (2012a, p. 162) notes that three commonly recognized predictors of digital inequality are gender, ethnicity and income. Bosch's (2009, p. 186) research investigates whether the profiles of students using Facebook at UCT reflect the "digital divide" with respect to language, class and race. Bosch (2009) found no significant patterns in respect of gender, but students tended to follow cultural (i.e. "friends" on Facebook were similar in terms of race) and linguistic (i.e. English was the dominant language) lines. Junco (2012a) noted that previous research indicates that there are "persistent differences along gender, racial and socio-economic lines in technology adoption and use". Hargittai (2007) investigated the use of six social networking sites in the USA and found that Latino students are less likely to use Facebook than Caucasians, and although Facebook was the most popular platform, white female students were more likely to use MySpace. This current study does not attempt to document whether there is a digital divide, but analyses students' perceptions using gender and language to determine whether gender or language has any influence on the perceptions of students regarding the usefulness of the social media platforms.

In concluding this section, the majority of the studies reported positive benefits in using social networking sites, although Madge *et al.* (2009) held the opposite viewpoint, and the literature reviews (Hew, 2011; Guy, 2012; Manca and Ranieri, 2013; Tess, 2013) referred to in the introduction to this paper indicated that the debate on social media's usefulness is ongoing.

3. Method

Using questions adapted from prior literature (Roblyer *et al.*, 2010; Mok, 2012) and personal knowledge of the contents of the Facebook page and Twitter account that had been set up, a questionnaire was drawn up. Using survey research allowed for both a quantitative and qualitative approach through the use of closed and open questions. Because it was not known how many students were using Facebook and how many students were using Twitter, it was decided to frame the questions without distinguishing between the two different platforms. As this is an exploratory study, further investigations could probe



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deeper into the differences in usage of the two platforms. The questionnaire was pre-tested using first-year teaching staff and where necessary, further adjustments were made. As this is the first time this questionnaire is being used, its robustness may be subject to further testing in the future should the research be replicated. The questionnaire consisted of background questions (shown in Tables I and II), and a number of statements which students were required to answer on a Likert scale of 1 (strongly disagree) to 5 (strongly agree) (shown in Tables IV and V). In addition, students were given the opportunity to add any reasons why they thought Facebook/Twitter was not an effective tool (shown in Table VI), and to give their suggestions as to how the platforms could be improved.

The questionnaire was distributed in a paper-based format to all first-year accounting students in their tutorial classes towards the end of the 2014 first semester. To comply with the relevant ethical protocols, students were informed that participation was voluntary and as their names or students numbers were not required, they would remain anonymous. Only students who were actually using the Facebook page/Twitter account were requested to fill in the questionnaire. At the time the questionnaire was administered, 493 students were enrolled in the course and 262[3] students filled in the questionnaire. The response rate based on total student enrolment was 53 per cent. At that time, there were 277 "likes" on the page. This may indicate that the number of students accessing the Facebook page was much lower than 493. As the survey was only administered once, it was not possible to examine for non-response bias. The data from the questionnaire were entered onto a spreadsheet and analysed using Excel. Table I shows the students' background information with regards to gender and language. Table II shows which platform was preferred and how many times the students were accessing Facebook and/or Twitter, and the average number of hours they were spending to prepare for accounting tutorials. Table III shows a cross-tabulation between the number of times students were accessing the social networking sites and the number of hours they were devoting to their tutorial preparation. The means, medians and standard deviations (SDs) for the total sample, and on a gender basis (Table IV) and a language basis (English vs non-English) (Table V), were then calculated. To identify statistically significant differences in the students' opinions on a gender or language basis, the Mann-Whitney U test for independent samples was used. These results are also shown in Tables IV and V. Finally, to provide further insight into the medians, hypotheses testing for all statements were also performed to determine if there was any difference between the medians of the groups on a gender or language basis. Table VI shows students' reasons for not considering Facebook an effective tool in the accounting course.

Gender	Male	Female	Total ^a
Number of students %	95 36.5	165 63.5	260 100
Home language (mother tongue) English? Number of students	Yes 158 60.3	No 104 39.7	Total ^a 262 100

Table I.Background information

Note: a In some instances, questionnaires were incomplete, leading to differences in the totals



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4. Results and discussion

Table I shows the gender and language background of the students.

Table I shows that female students (63.5 per cent) using the social networking sites outnumbered the male students (36.5 per cent). As the gender split for the entire class was 55 per cent female and 45 per cent male and because 63.5 per cent of the respondents



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		Female			Male			Total		Mann– Whitney test ^a	n- ey U
Statements	Mean	n = 165 Median	SD	Mean	n = 95 Median	SD	Mean	n = 260 Median	SD	Z	p^{b}
Communication: I found Facebook/Twitter a good communication tool between the lecturer and myself I referred using Facebook/Twitter to Moodle	2.824	3.000	1.153	2.758	3.000	1.137	2.800	3.000	1.145	-0.593	0.553
I found Facebook/Twitter useful to get information and keep up to date	3.049	3.000	1.320	3.053	3.000	1.143	3.050	3.000	1.256	-0.120	0.905
I found Facebook/Twitter a faster way to communicate with the lecturer	2.727	3.000	1.222	2.726	3.000	1.134	2.727	3.000	1.188	-0.091	0.928
I found Facebook/Twitter made my engagement with my lecturers easier	2.539	3.000	1.074	2.726	3.000	1.115	2.608	3.000	1.090	-1.433	0.152
Teaching and learning: Because of Facebook/Twitter, I felt more confident to approach my lecturers I found Facebook/Twitter a good way to keep up to	2.630	3.000	1.138	2.811	3.000	1.123	2.696	3.000	1.134	-1.163	0.245
date on the module logistics (venues, homework, test details etc)	2.673	3.000	1.195	2.937	3.000	1.236	2.769	3.000	1.215	-1.591	0.112
Then that the Facebook page/1 white othered support on a more personal level	2.915	3.000	1.191	3.042	3.000	1.110	2.962	3.000	1.162	-0.774	0.439
I was able to access information	2.752	3.000	1.056	2.884	3.000	1.080	2.800	3.000	1.065	-0.984	0.325
I found Facebook/Twitter a good way to ask questions	2.885	3.000	1.155	2.979	3.000	1.101	2.919	3.000	1.134	-0.711	0.477

Table IV.Students' perceptions on usefulness of Facebook/Twitter (gender)



0.278 0.848

-1.086 -0.191

0.967

3.000

2.769

3.000

2.853 3.032

0.991 1.082

3.000

2.721

found Facebook/Twitter challenged me to work out

the correct response myself I liked the way that solutions were debated

(continued)

Use of social
media
platforms

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		Female			Male			Total		Mann– Whitney U test ^a	n– ey U
Statements	Mean	n = 165 Median	SD	Mean	n = 95 Median	SD	Mean	n = 260 Median	SD	Z	$p^{ m b}$
I found it motivated me to work harder I liked the motivational messages on	3.109	3.000	1.115	3.053	3.000	1.133	3.089	3.000	1.120	-0.271	0.786
Facebook/Twitter	3.409	3.000	1.145	3.253	3.000	1.167	3.351	3.000	1.153	-1.153	0.249
I learned from sharing information with my peers	3.327	3.000	1.143	3.421	3.000	1.097	3.362	3.000	1.125	-0.739	0.460
I wish all modules used Facebook	3.079	3.000	1.343	3.158	3.000	1.266	3.108	3.000	1.314	-0.496	0.620
Career guidance: The information on how to become a CA(SA) was											
useful	3.697	4.000	1.181	3.821	4.000	1.072	3.742	4.000	1.142	-0.655	0.512
The link to Accountancy SA was useful	3.594	4.000	1.104	3.653	4.000	1.029	3.615	4.000	1.075	-0.358	0.720
The link to the SAICA website was useful (NowiCAn)	3.612	4.000	1.161	3.832	4.000	0.964	3.692	4.000	1.096	-1.242	0.214
In general, I found all the additional information relevant to my journey of becoming a CA(SA)	3.667	4.000	1.176	3.790	4.000	1.071	3.712	4.000	1.138	-0.629	0.530

Notes: ^aThe p-value from the Kolmogorov–Smirnov test indicates that none of the distributions are normal. Hence, non-parametric tests are used; ^bAll ρ values are >0.05 and are therefore statistically insignificant; A Likert scale where 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree was used

Table IV.



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		No.			Yes			Total		Mann–Whitney U test ^a	7hitney st ^a
Is English your home language? Statements	Mean	n = 104 Median	SD	Mean	n = 158 Median	SD	Mean	n = 262 Median	SD	Z	þ
Communication: I found Facebook/Twitter a good communication tool											
between the lecturer and myself I preferred using Facebook/Twitter to Moodle	2.692	3.000	1.107	2.861	3.000	1.170	2.794	3.000	1.146	-1.190 -1.363	0.234 0.173
I found Facebook/I witter useful to get information and keep up to date	3.269	3.000	1.240	2.886	3.000	1.252	3.038	3.000	1.259	-2.504	0.012*
1 jound Facebook I witter a laster way to communicate with the lecturer	2.837	3.000	1.167	2.652	3.000	1.205	2.725	3.000	1.191	-1.346	0.178
i round r'acebook i witter made my engagement with my lecturers easier	2.606	3.000	1.065	2.589	3.000	1.118	2.595	3.000	1.095	-0.200	0.841
Teaching and learning: Because of Facebook/Twitter, I felt more confident to approach my lecturers I found Facebook/Twitter a good way to keep up to	2.740	3.000	1.097	2.652	3.000	1.162	2.687	3.000	1.135	-0.756	0.449
date on the module logistics (venues, nomework, test factures atc)	3.039	3.000	1.165	2.595	3.000	1.216	2.771	3.000	1.213	-3.027	0.002*
I lett trat the Facebook page 1 witter onered support on a more personal level	3.192	3.000	1.080	2.810	3.000	1.185	2.962	3.000	1.157	-2.643	.0008*
I was able to access information	2.923	3.000	1.049	2.709	3.000	1.073	2.794	3.000	1.067	-1.827	890.0
1 round Facebook/ 1 Witter a good way to ask questions	3.212	3.000	1.067	2.734	3.000	1.137	2.924	3.000	1.132	-3.237	0.001*

Table V. Students' perceptions on usefulness of Facebook/Twitter (language)



0.274 0.059 0.010*

0.966 1.080 1.122

3.000 3.000 3.000

2.775 3.034 3.095

0.982 1.087 1.102

3.000

2.728 2.937 2.956

0.943 1.059 1.124

3.000

2.846 3.183 3.308

I found Facebook/Twitter challenged me to work out

I liked the way that solutions were debated found it motivated me to work harder

the correct response myself

(continued)

-1.094 -1.892 -2.590

		No			Yes			Total		Mann–Whitney U test ^a	hitney st ^a	
Is English your home language? Statements	Mean	n = 104 Median	S	Mean	n = 158 Median	SD	Mean	n = 262 Median	SD	Z	þ	
I liked the motivational messages on Facebook/Twitter	3.615	4.000	1.073	3.191	3.000	1.177	3.360	3.000	1.154	-2.949	0.003*	
learned from sharing information with my peers	3.558	4.000	1.122	3.234	3.000	1.107	3.363	3.000	1.122	-2.527	0.012*	
wish all modules used Facebook/Twitter	3.423	3.000	1.290	2.911	3.000	1.294	3.115	3.000	1.314	-3.145	0.002*	
Career guidance: The information on how to become a CA(SA) was												
nseful	4.164	4.000	0.904	3.481	4.000	1.204	3.752	4.000	1.143	-4.638	*000.0	
The link to Accountancy SA was useful	3.817	4.000	0.963	3.487	4.000	1.127	3.618	4.000	1.075	-2.334	0.020*	
The link to the SAICA website was useful (NowiCAn) In general, I found all the additional information	3.914	4.000	0.956	3.544	4.000	1.154	3.691	4.000	1.093	-2.459	0.014*	
relevant to my journey of becoming a CA(SA)	3.971	4.000	1.056	3.551	4.000	1.160	3.718	4.000	1.136	-3.040	0.002*	

Notes: $^{\circ}$ The p-value from the Kolmogorov–Smirnov test indicates that none of the distributions are normal. Hence non-parametric tests are used; * $^{\circ}$ values < 5%; A Likert scale where 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree was used.

Table V.



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to this questionnaire were female, this may indicate that using Facebook and/or Twitter is more popular amongst female students than male students. Although the majority of the students spoke English at home (60.3 per cent), almost 40 per cent of the students did not speak English at home.

To get some idea of the students' preference for either Facebook or Twitter, the number of times they were checking Facebook/Twitter, as well as the number of hours they were spending on the preparation of their accounting tutorials, a number of questions were posed around their preferences, usage and time. This information is shown in Table II.

Most students showed a preference for Facebook use (84.6 per cent) as opposed to Twitter (15.4 per cent). The majority of students (52.3 per cent) accessed their personal Facebook/Twitter account on average between one to four times per day. The results for the number of times per week students accessed the ACCT 101 Facebook/Twitter accounts showed a decreasing trend, except for those students who accessed the platforms at least 20 times per week (20 students) which was slightly higher than the number of students who accessed the platforms at least 10-19 times per week.

Students should spend at least 2 h per week preparing for their accounting tutorials. While 39 per cent of the students spent between 2 and 3 h a week preparing for their tutorials and another 24.4 per cent spent 3 h or more on preparation, 25.8 per cent of the students spent 1 to 2 h on preparation, and 10.8 per cent of the students spent less than 1 h preparing for their tutorials. A possible reason for students spending 2 h or less on preparation is that many of the students study accounting at secondary school, and therefore, they may feel that it is not necessary to spend unwarranted time on preparation.

A cross tabulation of the number of hours of tutorial preparation according to the average number of times the social networking site is checked is shown in Table III.

Table III shows that the 82 students (60 per cent) who check their personal social networking sites 1-4 times per day, spend on average 2 h or more on their tutorial preparation. Further, 32 students (65 per cent) who checked their personal social networking sites at least 5-9 times per day, spend, on average, 2 h or more on their tutorial preparation. In total, 23 students (74 per cent) who checked their personal social networking sites at least 10-19 times per day, spend, on average, 2 h or more on their tutorial preparation. Finally, 17 students (65 per cent) who check their personal Facebook/Twitter account at least 20 times a day, spend at least 2 h or more on their tutorial preparation. This result shows that, on average, students who check their personal Facebook/Twitter accounts the least number of times (i.e. 1-4 times) do not spend any more time on tutorial preparation than those students who spend more time (i.e. 5 to at least 20 times) checking their personal social networking sites. On average, 74 per cent of the students in the band of 10-19 times spend 2 h or more on tutorial

Table VI.Reasons why
Facebook was not an effective tool

Reasons	No.	Rank
I prefer Moodle The Facebook page duplicated information which was already on Moodle The Facebook page added to communications channels with which students were	50 33	1 2
expected to keep up to date	20	3



preparation compared to the 60 per cent of the students in the band of 1-4 times, and 65 per cent of the students in the bands of both 5-9 times and 20 times or more.

Thus, while the number of times students check their Facebook/Twitter account decreases as the number of times the accounts are accessed is increased (Table II), an analysis of the number of hours of preparation according to the average number of times the personal social media site is checked does not show that as students access their personal Facebook or Twitter account increases, does the number of hours set aside for tutorial preparation decrease. This result shows that frequent checking on personal social networking sites does not negatively affect the number of hours students spend on their tutorial preparation. This may indicate that setting up informal communication channels and engaging with students in different ways by using different technology does not detract from the time and effort spent by students on the formal learning programme.

These results confirm those of Junco (2012a) who found that Facebook checking is not detrimental to preparation. While this current study did not investigate how long students were spending on the social networking sites, these results show that social networking site checking takes place several times a day which is consistent with other studies (Mok, 2012; Arteaga Sánchez *et al.*, 2014).

Students' perceptions of the usefulness of the social media platforms were next investigated. This analysis is presented in Tables IV and V under three headings: *Communication, Teaching and learning* and *Career guidance*. Table IV shows the mean, median and the SD using a gender split of the results. Table V shows the same information using a language split of the results. Tables IV and V also show the total mean, median and the SDs for each statement, and the results of the Mann–Whitney U test for gender and language differences.

Using the total means and medians for the statements listed under *Communication* in Table IV for the analysis, it can be seen that no strong agreement is attached to any of five statements. Students did not express a preference for Facebook as opposed to Moodle (m = 2.262). This latter score indicates that students prefer Moodle. Bosch (2009), Irwin *et al.* (2012) and Mok (2012) found communication benefits in the use of Facebook and Deng and Tavares (2015) found student teachers preferred Facebook to Moodle when it came to communicating, discussing and sharing. In contrast, this study did not find strong support for the statements on communication, which may indicate that for this group of students, their communication channels are catered for already using Moodle.

Out of the 11 statements in the *Teaching and learning* section, five statements had total means >3.000, with the two highest being: *I liked the motivational messages on Facebook* (m = 3.351) and *I learned from sharing information with my peers* (m = 3.362). The medians for all 11 statements equalled 3.000. Thus, there is not strong agreement by the students that the social media platforms had any teaching and learning benefits using these statements as indicative of such benefits. These results confirm the results of Bosch (2009), Irwin *et al.* (2012) and Ivala and Gachago (2012) only with respect to the *motivational messages* and *learning by sharing the information* which may indicate that this is where the usefulness of Facebook/Twitter lies with regards to teaching and learning for this group of students. This would confirm the findings of Deng and Tavares (2015) where student teachers were using Facebook for sharing information albeit in a different scenario.



The career guidance statements were targeted at the CA profession. All the statements on *Career guidance* were supported. Overall, students agreed that the information on how to become a CA(SA) was useful (m = 3.742), the link to Accountancy SA was useful (m = 3.615), the link to the SAICA website was useful (m = 3.692) and all the additional information pertaining to their journey of becoming a CA(SA) was relevant (m = 3.712). All total mean scores for the career guidance statements of >3.000 in contrast to the other sections and all medians equalled 4.000. Thus, first-year accounting students find the career information and links useful in providing more information about the CA(SA) route.

The Mann–Whitney U test for gender differences showed no significant differences for all statements in Table IV. Furthermore, testing for whether the medians are the same across gender for all statements showed no difference between the female and male students at a significance level of 0.05. Therefore, male and female students have similar perceptions of the Facebook and Twitter sites in the areas of communication, teaching and learning and career guidance.

Table V shows the mean, median and SD for the statements sorted on a language basis (not English vs English), and the results of the Mann–Whitney U test for language differences.

An examination of the total mean scores, calculated on a language basis in Table V. shows that for all the statements, except the first one (I found Facebook/Twitter a good communication tool between the lecturer and myself), the means were higher for the students whose home language was not English. However, many of the means are < 3.000, and most medians equal 3.000. Out of the five statements concerning Communication, the statement that had the most support from the non-English speaking students was the statement I found Facebook/Twitter useful to get information and keep up-to-date (m = 3.269). The Mann-Whitney U test for differences in samples showed a significant difference where p < 5 per cent for this statement (p = 0.012). Testing for significant differences in the medians of the two groups also confirmed that the null hypothesis (that the medians of the two groups are the same with regards to this statement) is rejected at 0.05 significance level. While non-English speakers indicated that the social media platforms were useful to get information, their mean score for the first statement, I found Facebook/Twitter a good communication tool between the lecturer and myself, was lower than the mean score for English-speaking students. There may be some reluctance by non-English-speaking students to communicate directly with their lecturers using any platform, as this group of students may have had an inferior secondary schooling experience because of past injustices that still exist in the South African schooling environment (Mdepa and Tshiwula, 2012).

With regards to the *Teaching and Learning* statements, the Mann–Whitney U test for differences in samples showed significant differences where p < 5 per cent for seven of the statements in this category. The statements *I found Facebook/Twitter a good way to keep up-to-date on the module logistics* (p = 0.002) is significantly different between the two samples. Other teaching and learning statements that were also significantly different were those dealing with personal support (p = 0.008), a good way to ask questions (p = 0.001), motivation (p = 0.010), motivational messages (p = 0.003), sharing of information (p = 0.012) and wishing that all modules used Facebook/Twitter (p = 0.002). Testing for the null hypothesis that there is no difference between the medians of these statements for the two groups resulted in the null hypothesis being

rejected for six of the statements at 0.05 significance level. The only statement which is different to the seven statements referred to above is the statement on personal support. Setting up a Facebook page and a Twitter account for teaching and learning may be helpful to this group of students who are able to access the relevant sites using mobile phone technology without having to resort to a computer.

For the Career Guidance statements, the Mann–Whitney U test for differences in samples showed a significant difference where p < 5 per cent for all statements in this category. These statements are *The information on how to become a CA(SA) was useful* (p = 0.000), *The link to Accountancy SA was useful* (p = 0.020), *The link to the SAICA website was useful* (*NowiCAn*) (p = 0.014), and *In general, I found all the additional information relevant to my journey of becoming a CA(SA)* (p = 0.002). Testing for the null hypotheses for these career guidance statements (that there is no difference between the medians of the two groups) were all rejected at a 0.05 significance level. Students whose home language is not English are therefore significantly more in support of all the career guidance statements when compared to the English-speaking students.

This career information was also posted on Moodle. It is possible that the easier access which Facebook/Twitter affords to students through their mobile phones may have contributed to the agreement with the above statements, as there is no need to log onto a computer to access the information. However, as students were not asked for their opinions on the career information placed on Moodle, it is not possible to infer whether the social networking platforms or Moodle was the most preferred way of accessing the information. The finding that non-English speaking students find career guidance information significantly more useful than English-speakers when posted on a social media site is relevant for other educators who may wish to promote career opportunities to their students.

These findings (that there are no significant gender differences but that there are significant language differences) on the usefulness of the social networking sites can be contrasted to the findings of Hargittai's (2007) research which found gender and racial differences in social media usage. Using language differences as a surrogate for racial differences provides some support for Hargittai's findings with regards to race. Although there were differences in the mean scores for male and female students for a number of statements, none of these differences were statistically significant and therefore this study does not support Hargittai's (2007) findings on gender differences. This current study only asked students who were actually using the social networking sites for their opinions, which may be reflected in the breakdown of the respondents by gender which showed that 63.5 per cent were female and 36.5 per cent were male. As indicated before, this can be contrasted with the gender split of the entire class which was 55 per cent female and 45 per cent male. This may then indicate that as far as the usage of Facebook/Twitter is concerned, there are differences between female and male usage, although with regards to usefulness of Facebook/Twitter, there are no differences in the opinions of male and female students.

The questionnaire had two final questions. The first question asked students whether there were any reasons why Facebook was not an effective learning tool. Two reasons were suggested by the questionnaire and students were given the opportunity to suggest their own reasons. These results are shown in Table VI.

Table VI shows that the reason which had the most support of the students was one which was added by the students themselves, that they prefer Moodle (first). Thus,



approximately 50 students (out of about 260 students) or 19 per cent of the sample indicated that they prefer Moodle. However, they did not elaborate on what aspects of Moodle were more superior to Facebook or Twitter. Further, 33 students felt that the Facebook page was duplicating information already on Moodle (second) and 20 students were concerned with the overload in communication channels (third). No other reasons were supplied by the students.

Finally, students were asked whether they could suggest any recommendations for improving the Facebook/Twitter page. Further, 14 students wrote comments on how the Facebook page or Twitter account be improved. Five students indicated that they preferred Moodle, and one student indicated that he/she preferred Facebook. Suggestions made by the remaining eight students were as follows:

- students should be notified by e-mail that social media will be used to convey messages on module information;
- (2) notify all students by e-mail that there is a Facebook page and/or Twitter account;
- (3) the information must be updated regularly;
- (4) whatever is loaded on Moodle should be loaded on Facebook and Twitter too;
- (5) important links should be clearly shown at the top of the Facebook page in a designated area;
- (6) include more exam tips on how to approach exam-type questions;
- (7) Moodle should include topics discussed on Facebook and Twitter; and
- (8) tutors should be made available on Facebook and Twitter.

To give a perspective from the teachers of the first-year accounting course, the teaching staff reported that they thoroughly enjoyed using the social media platforms, especially as they could share relevant news items and articles easily with the students, and link it back to what they had lectured recently, and engage with them on it, as well as be able to respond to students' queries in a timely manner. The teaching staff perceived that students felt more comfortable using the informal communication lines as opposed to sending emails. The teaching staff reported that they could have a timelier conversation with their students and that this may have helped with their understanding and clarification of concepts. While this information was also posted on Moodle, there is no option to comment on the articles, and access to a computer is required before students can log into Moodle. Generally, the teaching staff felt that the ease of use of the social media platforms allowed the students timelier access to the information when compared to Moodle.

In concluding this section, this study has described some of the five tenets of engagement (Junco, 2012a) as discussed in the theoretical framework. The study has shown that students spend energy using Facebook (Tables II and III) with some spending more time than others (Tenets 1, 2 and part of 3). However, the activities students engaged in on Facebook (Tenet 3), the relationship of student engagement in Facebook and thus to learning (Tenet 4) and whether it increases students' engagement to improve student performance (Tenet 5) are not described in this study, although a number of questions were posed around engagement (Tables IV and V).

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5. Conclusion, limitations and further research

The objective of this exploratory research was to describe the use of social media platforms in a first-year accounting course at a South African university and provide evidence on whether students found these social networking sites useful. The results show that students are engaging with the social media platforms (usage and differences in time spent), but a link between engagement in the social media platforms and teaching and learning was not apparent, as the study did not find strong support for the usefulness of the social media sites. Instead, the existing communication channel (Moodle) was considered better than the additional social media platforms. The study found no gender differences in students' perceptions with regards to the statements posed around communication, but did find a significant statistical language difference for the statement *I found Facebook/Twitter useful to get information and keep up-to-date*. This indicates that for non-English speakers, Facebook and Twitter are significantly more useful to them in this aspect than for English-speaking students.

With reference to whether there were any teaching and learning benefits from Facebook/Twitter, the main benefit is in motivating students using motivational messages and learning by sharing. While there were no significant differences in the responses of the male and female students with regards to the statements, an examination of the means between the two groups on a language basis showed that for all 11 statements, the means, albeit low, were higher for the non-English speakers, and in addition, there were significant differences where p < 5 per cent for seven of the statements in this category. Non-English speakers were supportive of statements concerning motivation, sharing, keeping up-to-date, support on a personal level and wanted more of their modules to adopt this approach of using Facebook/Twitter. Motivated students may put more effort into their studies and may engage with the subject material in ways that may lead them to perform better. Students also learn from their peers by sharing information. This result is important for other educators who have large numbers of students being instructed in a language (English) which is not their home language.

Students found the career guidance information provided on Facebook/Twitter useful as all the total mean scores for the career guidance statements > 3.000 and all the medians were equal to 4.000. None of the differences on a gender basis were statistically significant in this section. On a language basis, the Mann–Whitney U test for differences in samples showed significant differences where p < 5 per cent for all statements in this category.

In summary, overall, the results did not show that students found these social networking sites useful in all aspects of communication and teaching and learning. Only when the results were analysed on a language basis did statistically significant differences for a number of the statements emerge. This has implications for other educators who may have students with different language capabilities in their classrooms, as non-English-speaking students were more in agreement regarding the usefulness of the social media sites for communication, teaching and learning and career guidance. This study assists other educators faced with student disruptions, large classes or high numbers of international students whose first language is not English and who may need to find alternative methods for student communication. It is possible that interfacing with Facebook and Twitter may increase first-year accounting students' engagement with the course as a number of statements referred to

engagement. However, this would need to be researched more thoroughly in a follow-up study.

Limitations of the study are that the questions did not distinguish between Facebook use and Twitter use and instead regarded them as interchangeable. However, in view of the fact that most of the students were using Facebook, the results could be generalisable to Facebook use. The study also did not ask students who were not using the two social media platforms their reasons for this, and this could also be considered a limitation of the research. The questionnaire also did not explicitly state in all questions that their perceptions should be benchmarked to Moodle. As this is an exploratory study, a follow-up study could avoid these limitations. The students were first-year accounting students on one campus and therefore the results cannot be generalised beyond this particular sample. Furthermore, all the data used were self-reported by the respondents and it is not possible to verify whether the students were truthful in their answers.

A number of future developments on Facebook use in this module provide more areas for further research. The possibility of organizing study-groups on Facebook, or offering "open time" sessions for approximately 1 h a week and including tutors on the platform where discussions can take place in a chat room format on a particular topic offer areas for future research. Students on a smaller campus also have access to this platform, and ascertaining their opinions on Facebook use would provide a useful contrast to the environment where this research was carried out, that is, a much larger campus. Other areas for research could be asking students who are not using Facebook and/or Twitter their reasons for not using these platforms, students' perceptions of Moodle and comparing the grades of students who are utilizing the social media platforms with those students who are not using the platforms.

Notes

- 1. The university, in which the course referred to in this study is presented, is one of only six South African universities listed in the first 600 universities in the world (QS World University Rankings, 2015). University X is used as a pseudonym for this university.
- First-year accounting students choose between enrolling for ACCT 101 (for students following the chartered accountancy programme) or ACCT 103 (for students following a general programme). First-year accounting students in this paper refer only to students in the chartered accountancy stream.
- 3. Students are not exempted from this course even if they have studied accounting in secondary school. A number of students may not have attended the tutorial sessions at which the questionnaire was administered, as they are allowed to miss a certain number of tutorials or they were already familiar with the material for that week.

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